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USERS' MANUAL
MEDICAL EXAM SCHEDULING MODULE

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Marianne Follingstad

The MITRE Corporation
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The Medical Examination Scheduling (MES) module consists of a list of options that allow users to access the Navy Occupational Health Information Management System (NOHIMS) Industrial Hygiene (IH) Component database in order to perform these functions:

 (1) enroll and remove employees from Medical Programs manually.
 (2) schedule employees for examinations for Medical Programs.
 (3) maintain medical qualifications for employees.

The System automatically enrolls employees for occupationally required programs and automatically removes them if terminated, program is deleted from occupational requirements, they have missed an excessive number of examinations.

This manual provides an overview of the module's functions. Emphasis is on reports available from this module.

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USERS' MANUAL
MEDICAL EXAM SCHEDULING MODULE

1.0 BACKGROUND

1.1 Purpose of the Manual

This manual describes the capabilities of the Medical Exam Scheduling (MES) module of the Navy Medical Command's (NAVMED) Navy Occupational Health Information Management System (NOHIMS). After presenting some background information on the total NOHIMS, the manual describes the module's significant data input and output processes. Examples of the output reports appear in the appendices. The information in this document is intended to help the reader understand how this module can help manage the clinic's scheduling process, track employee medical qualifications, and ensure that employees receive necessary medical examinations in each Navy facility.

1.2 References

The following publications provide background information on the Medical Exam Scheduling module:

o NOHIMS Medical Exam Scheduling Module Functional Design Specifications

o Navy Occupational Safety and Health (NAVOSH) Program Manual, OPNAV Instruction 5100.23B

o Department of Defense Occupational Health Surveillance Manual, DoD 6055.5-M

1.3 Terms and Abbreviations

The following terms and abbreviations are used in this manual:

o **Agency**: An Executive Department, as defined in 5 U.S.C. 101, or any employing unit or authority of the Government of the United States not within an Executive Department to which the provisions of Executive Order 12196 are applicable.

o **Automated Scheduling System**: Indicates that all appointments are filed into a schedule of dates and time slots. Each time slot included in an appointment is checked by the system for available capacity and for shift or program preferences.

o **Date Next Exam:** For periodic program enrollments, this indicates the date by which the employee is expected to be scheduled for an exam. For one-time enrollments or for removed programs, this indicates the month and year in which the one-time or removal exam should be given.

o **Disposition:** A determination of whether an appointment was attended, missed, or cancelled.

o **Expiration Date:** The date on which an employee's periodic program qualification expires. As adjusted by the clinic-specified Qualification Grace Period, it is the program enrollment Date Next Exam or a scheduled appointment date, whichever is later.

o **Location:** A four-tiered description of a physical place consisting of site, location, sublocation, and area.

o **Manual Scheduling System:** Indicates that all appointments will be scheduled by the user with no system scheduling or checking on clinic availability.

o **MUMPS** (**M**assachusetts General Hospital **U**tility **M**ulti-**P**rogramming **S**ystem): The programming language used to develop NOHIMS.

o **One-time:** A program exam or enrollment that does not anticipate or require any periodic reexamination.

o **Operation:** A defined set of procedures, each with its own code, that is used to classify specific tasks performed by employees in the course of their work.

o **Periodic:** A program exam or enrollment indicating need for regular medical surveillance at the interval specified by the reexamination frequency. The exam results for these programs determine an employee's medical qualification status for related occupations, operations, locations, and stressors.

o **Program:** A means of classifying employees for medical surveillance that specifies the protocol an employee should be subject to when working in an occupation, location, operation, or with a stressor, or when requiring evaluation based on past exposure to a stressor. Programs may be generic or specific to a stressor, operation, or occupation (e.g., sight conservation, asbestos, fork lift operator).

o **Program Preference:** A medical program that is to be given preferential treatment in scheduling during specified time periods, e.g., an exam needing the presence of a special practitioner who is available one morning each week.

o **Protocol**: The list of medical history items, physical examinations, and lab tests that an employee should be given during an examination for a medical program.

o **Stressor**: Any chemical substance, biological agent (bacteria, virus, fungus, etc.), or physical stress, noise, heat, cold, hypo-hyperbaric pressure, etc., which is:

    1. Regulated by any NAVOSH standard or Federal law or rule due to a hazard to health.

    2. Listed in the latest printed edition of the National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemicals.

o **To Be Scheduled (TBS)**: A file of employee programs that await immediate scheduling by the clinic.

1.4 Medical Exam Scheduling Module Overview

The MES module tracks employee medical surveillance program exam requirements and medical qualification statuses, supports automatic or manual clinic scheduling with appointment notification and exam protocol generation, and provides data for monitoring employees' exam histories. Figure 1-1 shows the major processes, inputs, and outputs of the module.

The primary function of this module is to ensure that employees receive necessary medical surveillance. To accomplish this, the system relies on medical surveillance program enrollment, scheduling, and qualification tracking. Figure 1-2 illustrates the general flow of employee medical program data in this module.

The module first enables the user to establish medical surveillance programs and associated medical exam protocols that are linked by the user to appropriate locations, stressors, occupations, and operations. Employees in an occupation that is linked to medical programs are automatically enrolled in the programs for periodic surveillance, and the newly required programs are filed in the To Be Scheduled file. An employee who is over-exposed or over the medical surveillance action level for a stressor may be enrolled for a future one-time checkup or have an entry filed in the To Be Scheduled file for all programs linked to the stressor, depending on the monitoring recommended for that stressor. To supplement these automatic "required" occupation and "personal" exposure enrollments, the user can enroll employees into medical programs for "job-related" (operation, location) or other "personal" reasons. Enrollment is generally for periodic programs with annual, semiannual, or other frequencies, but it can also be used to ensure a one-time exam in the future.
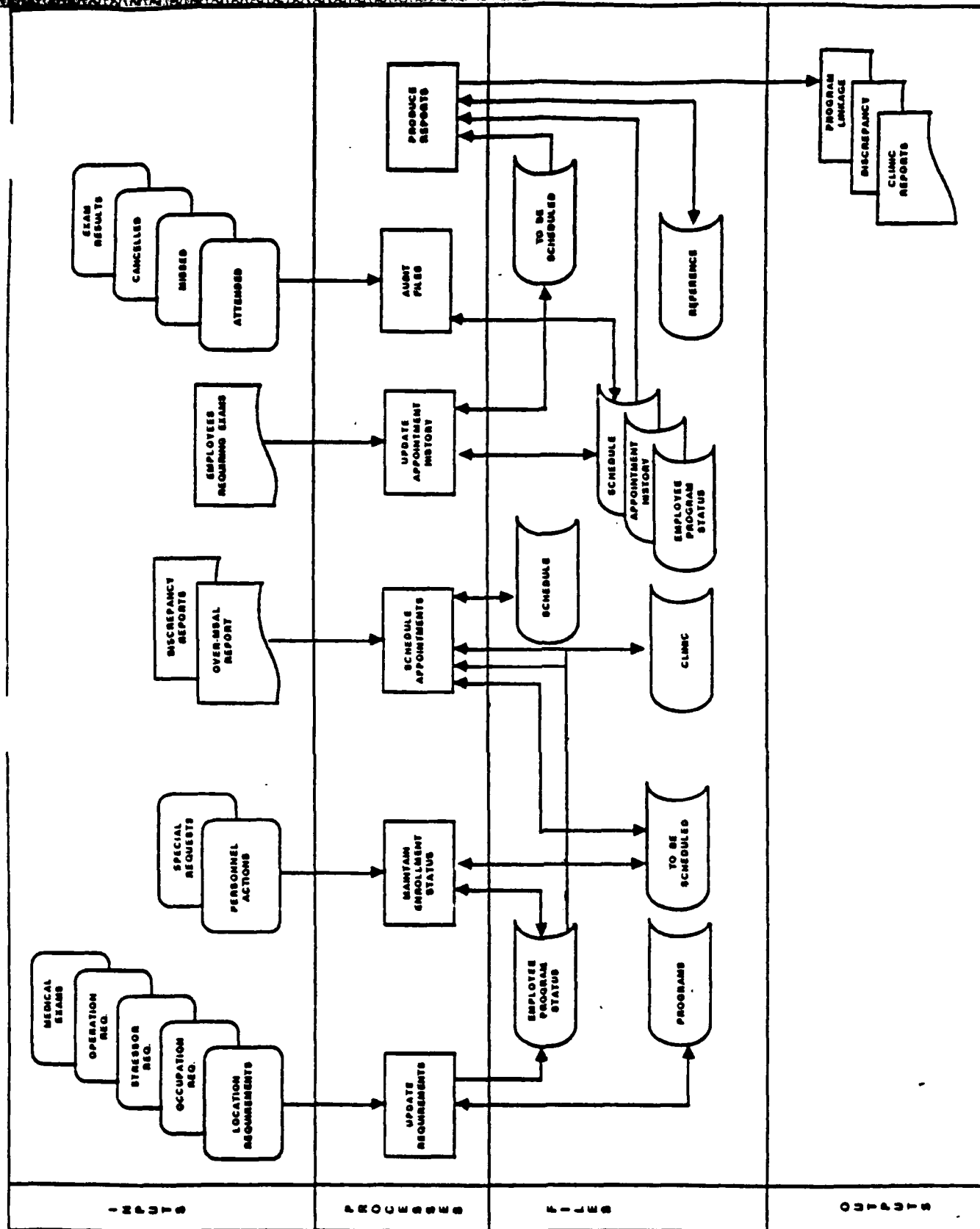
FIGURE 1-1
OVERVIEW OF MEDICAL EXAM
SCHEDULING MODULE
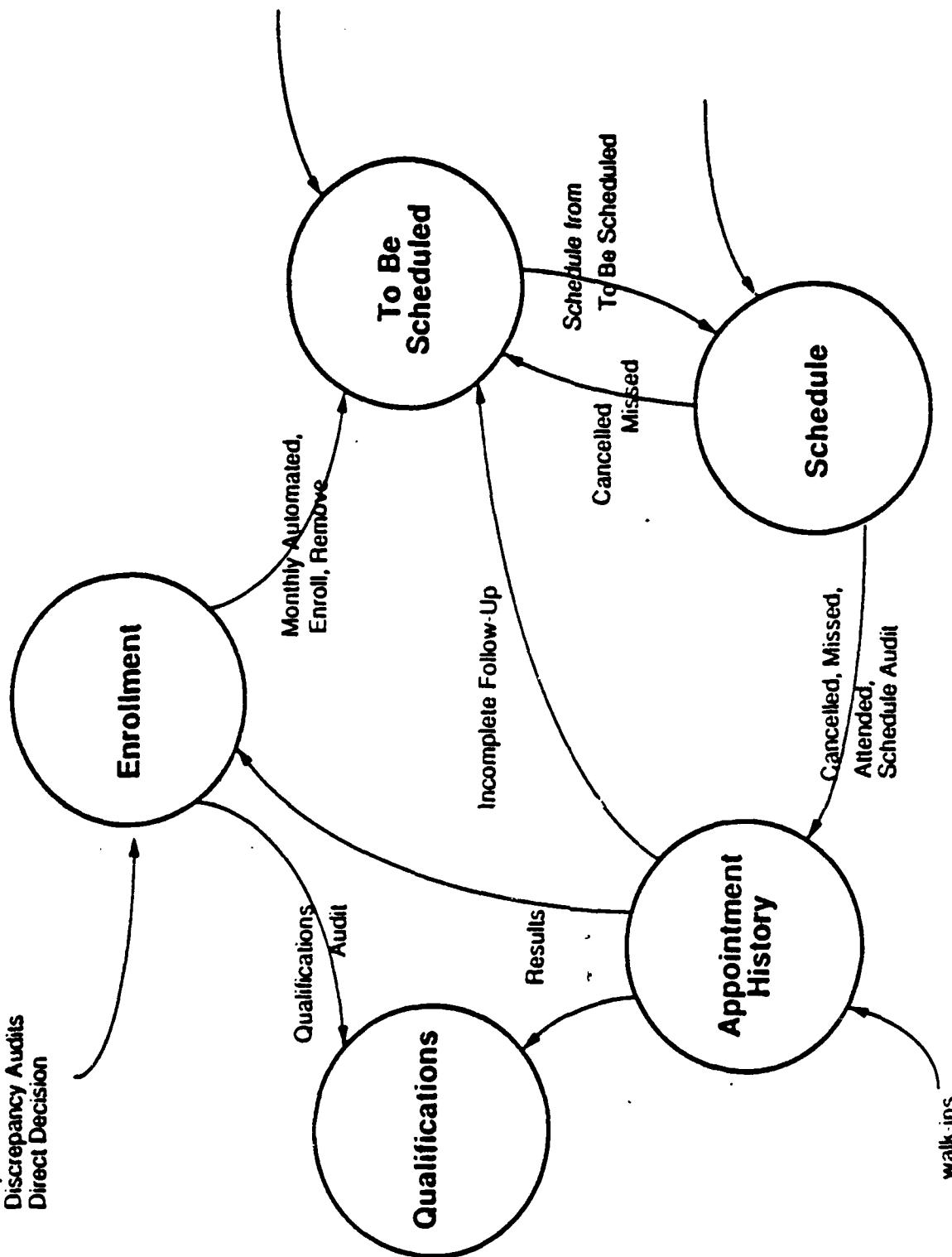
FIGURE 1-2
MEDICAL EXAM SCHEDULING
DATA CYCLE

Employees are automatically removed from enrollment when they are terminated, when a program is deleted from their occupation requirements, when the system determines that they have missed an excessive number of consecutive exams, or, for one-time enrollments, when the program is moved to the To Be Scheduled file. The user can also remove an enrollment directly, at which time the user specifies whether a removal exam is to be performed either now or in the future.

Once a month the clinic will have the system review all associated employee records and identify those having one-time or periodic program enrollments that need a baseline, periodic, or removal exam in the specified month. These programs are filed in the To Be Scheduled file.

Under the scheduling part of the system, each clinic will have the choice of a manual scheduling system or an automated scheduling system. Under either method, the user can at any time schedule or reschedule appointments directly and either incorporate programs that are in the To Be Scheduled file or enter other desired program data. In addition, under an automated scheduling system, the user can have the system schedule appointments for programs that need to be scheduled, or the user can have the system list the employees and programs that need to be scheduled and list "blank" time slots that are available by shop for scheduling. In the latter case, the shops will use the employee lists to assign appointments, and the clinic will enter the appointments directly. The system will distribute a shop's appointments or blank time slots over several days. System scheduling can be run more than once a month, if desired.

Under an automated scheduling system, the user can specify holidays, administrative time, availability of time slots, time slot length, and preference for seeing employees from a specific shift or program at specific dates and times.

Whenever an appointment date and time has been assigned or changed, the system prints out an appointment notice addressed to the employee listing the appointment date and time, medical programs covered by the appointment, and any pre-examination instructions that the employee should follow prior to the appointment. The clinic can, for a specific day or appointment, print individual appointment exam protocols that list exposure data, the employee's enrollments, the appointment programs and the medical history, physical exams, and lab tests appropriate to the employee's age and sex for the medical programs specified in the appointment. The physician will use this report to record program exam results of "qualified," "not qualified," or "incomplete." The clinic will enter missed, cancelled, or attended appointments directly or will flag an existing scheduled appointment as missed, cancelled, or attended. For cancelled or missed appointments, the clinic will be able to reschedule the appointment directly or file the programs in the To Be Scheduled file. For attended appointments, the clinic can add information on the employee's arrival and departure time and can enter program exam results as they become available.

1-6

The system also tracks the medical qualifications of each employee. When a user records an appointment as attended, a qualification of "pending" is filed in the employee record for each program covered by the appointment. When a program result is entered as "incomplete," the employee program qualification status is left as "pending" and the program is filed in the To Be Scheduled file for a follow-up exam. When results of "qualified" or "not qualified" are entered in the appointment history, the system also files them in the employee's program qualifications and increments the qualification expiration date by the examination frequency. For medical surveillance programs in which an employee is enrolled for periodic reexamination, the system will file a "not qualified" if the qualification expiration date is past. The system generates a regular report on employee qualifications and the user may request a special report at any time.

2.0 NOHIMS OVERVIEW

2.1 NOHIMS Modules

NOHIMS is divided into two separate components--the Industrial component and the Medical component. The Industrial component consists of four major application modules--Administration, Environmental Exposure, Medical Exam Scheduling, and Hazardous Materials Control--and various special purpose support modules. The Administration module maintains files that are used by all or most of the other application modules; these files contain data on employees, locations, operations, occupations, stressors, and agencies. The supporting modules, to be developed at a later date, will provide interfaces to statistical and graphics packages and will also permit transmission of data between NOHIMS computers. The Medical component of NOHIMS is a modification of the public-domain software package COSTAR (COmputer-STored Ambulatory Recordkeeping system).

2.2 System Environment

NOHIMS will be implemented in medical clinics at Naval Air Rework Facilities (NARF's) and Navy shipyards navy-wide; computer hardware dedicated for use by NOHIMS will be procured and installed there. The system will be hosted on minicomputers using video display terminals (VDT's), workstations, and printers located throughout the host facility. The size and number of minicomputers will differ from location to location depending on workload and geographic distribution considerations. Data will be entered on-line and will be able to be retrieved either on-line or via reports printed at night (or at any later time).

NOHIMS is programmed in the MUMPS programming language, the Veterans Administration (VA) FileMan and Kernel software packages, and the COSTAR software package. Initially developed at the Laboratory of Computer Science at Massachusetts General Hospital, the Massachusetts General Hospital Utility MultiProgramming System (MUMPS) programming language is a combination operating system, file handler, and interpreter. The language was designed from its conception for use in an on-line, multi-user environment. MUMPS is a general-purpose language especially suited to storing and retrieving hierarchical data and processing strings (e.g., free text data) efficiently.

Using the MUMPS language, the VA developed the VA FileMan software package. A programmer or an end-user can use the features of the VA FileMan to specify the characteristics of files and/or fields within these files and to save these specifications in a data dictionary, to specify standard input and output processes and to store these processes in templates, and to execute ad hoc queries against a VA FileMan data base. The VA Kernel displays and manages the system's menus, controls user and device access to the system, manages the security features associated with menus, devices, and users, provides electronic mail functions, and enables users to schedule jobs

for later execution. Most NOHIMS files and input and output processes are implemented using VA FileMan. Processes that could not be efficiently or effectively accomplished using the features available in VA FileMan were developed using the MUMPS programming language.

2.3 System Data Base

NOHIMS contains over 100 files. There are two types of files:

o Application files--These files are primarily intended to support the functions of a specific module, although in certain cases they may be used by other modules. In addition, the contents of these files change frequently as new data is added to the files or old data is removed from these files.

o Reference files--These files are primarily intended to be used by a specific module, although in certain cases they may also be used by more than one module. These files differ from application files in that they contain controlled vocabularies of terms. The contents of these files are usually static or change slowly over time.

In many cases, the contents of reference files have been received from various sources within the Navy. It is possible, however, for the local site to build its own reference files. The application files used by the Administration module--Agency, Employee, Location, Operation, Occupation, and Stressor--frequently act as reference files in that they control what data can be entered into certain data fields. The contents of three of these files, Agency, Employee, and Location, can be changed by the local site.

There are no software limitations on the size of files, the number of fields in the files, or the number of files in the system.

3.0 MEDICAL EXAM SCHEDULING MODULE INPUT PROCESS

3.1 Summary of Input Processes

The MES module contains many menu options that enable the user to enter
data into the module's files or to edit or delete existing data. These
options can be grouped into processes where each process performs enter,
edit, or deletion activities on a specific type of data. There are six major
input processes in the Medical Exam Scheduling module. These are:

o Update Requirements

o Maintain Enrollment Status

o Schedule Appointments

o Update Appointment History

o Audit Files

o Maintain Reference Files

The first process, Update Requirements, maintains the linkages between
medical programs and the occupations and stressors that require medical
evaluation or the locations and operations that indicate a need for medical
evaluations. In the Maintain Enrollment Status process, changes are made to
an employee's medical surveillance program enrollment according to a defined
set of criteria. Employees are scheduled for appointments under a variety of
circumstances, using one of the methods of scheduling available under the
Schedule Appointments process. The user will record attended, cancelled, or
missed appointments and the results of exams in the Update Appointment
History process. The Audit Files process is used to maintain the integrity
of the data in the files. The files that support the module are updated
using the Maintain Reference Files process.

3.2 Update Requirements

The Update Requirements process (Figure 3-1) is used to enter data for
defining medical surveillance programs, establishing exam protocols, and
linking programs to appropriate locations, stressors, operations, and
occupations. The user enters and updates data using the following functions:

o Medical Program Table Entry/Edit--This function allows the user to
   identify the program, its status, valid reexamination frequencies,
   pre-exam instructions, and exam protocols

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│  REQUIREMENTS   │
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         │        ┌──────────────────────┐
         ├────────┤   MEDICAL PROGRAM    │
         │        │        TABLE         │
         │        │     ENTRY/EDIT       │
         │        └──────────────────────┘
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         ├────────┤  LOCATION/MEDICAL    │
         │        │       PROGRAM        │
         │        │       LINKAGE        │
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         │        ┌──────────────────────┐
         ├────────┤  OPERATION/MEDICAL   │
         │        │       PROGRAM        │
         │        │       LINKAGE        │
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         │        ┌──────────────────────┐
         ├────────┤  STRESSOR/MEDICAL    │
         │        │       PROGRAM        │
         │        │       LINKAGE        │
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                  │       MEDICAL        │
                  │  PROGRAM LINKAGE     │
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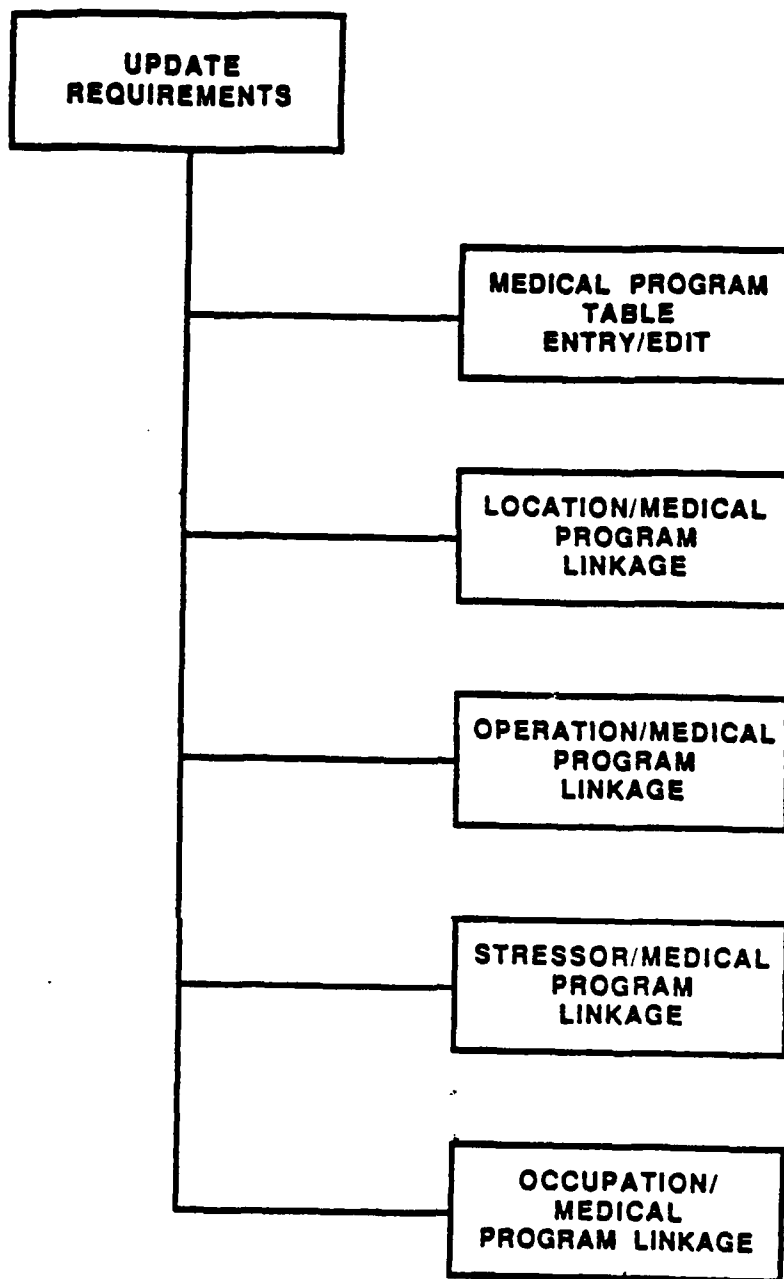
FIGURE 3-1
UPDATE REQUIREMENTS PROCESS

o Location/Medical Program Linkage--This function defines the program requirements set by the user for employees working in specific locations

o Operation/Medical Program Linkage--This function allows the user to establish program requirements for employees working in specific operations

o Stressor/Medical Program Linkage--This function defines the program requirements set by the user for employees exposed to specific stressors

o Occupation/Medical Program Linkage--Under this function, the user establishes the program requirements for employees working in specific occupations

This process should ensure that employee medical surveillance requirements are consistent with standards while requiring minimal user oversight. The MES module uses controlled vocabularies and data consistency checks to ensure data validity and completeness for minimal effort. Whenever a user changes program reexamination frequencies, inactivates a program, or modifies program/occupation links, the system will automatically review the Employee file for conflict with current enrollments, make changes when possible, and produce a Program/Occupation Changes Discrepancy Audit.

3.3 Maintain Enrollment Status

The Maintain Enrollment Status process (Figure 3-2) is used to enter data on employee medical surveillance programs and future one-time exams. The user can enter and update the enrollment data when using the following functions:

o Enter/Edit Employee--User entry of a new or changed occupation will result in a system review of the employee's enrollment. The employee will automatically be enrolled for periodic surveillance and placed in the To Be Scheduled file for any newly-required programs. For current "job-related" or "personal" medical program enrollments that are newly-required, the enrollment will be upgraded to "required." The user will be warned about existing "required" enrollments that are not required for the new occupation.

o Terminate Employee--The system will automatically remove an employee from all program enrollments upon termination.
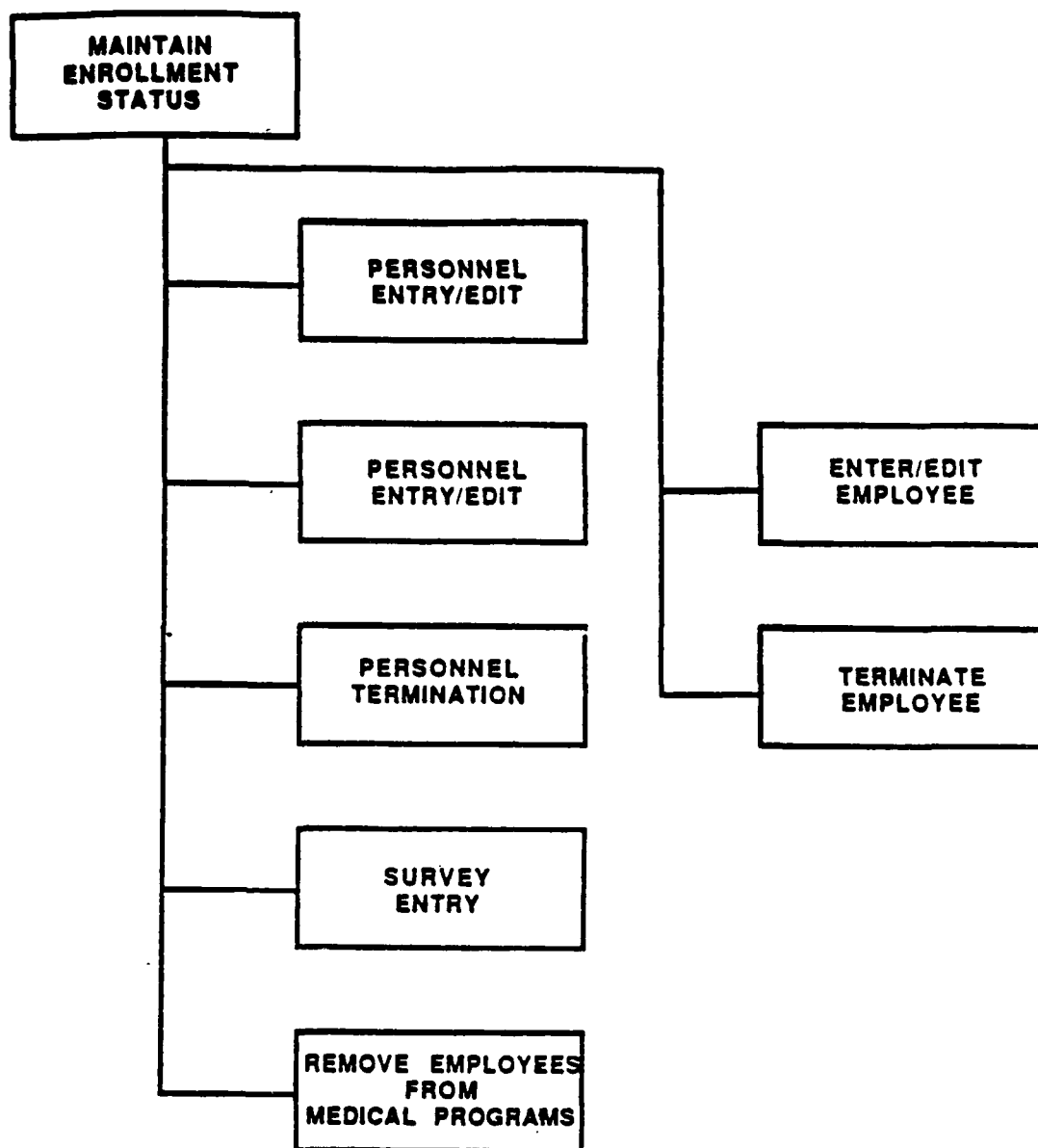
FIGURE 3-2
MAINTAIN ENROLLMENT STATUS PROCESS

3-4

o Survey Entry—When a survey entry indicates that an employee has
   been exposed over the medical surveillance action level for a
   stressor with recommended medical monitoring, the system will enroll
   the employee in related programs for a one-time exam in the
   employee's birthmonth. (Note: For an over-exposure or an exposure
   over the medical surveillance action level to a stressor with
   mandatory medical monitoring, the employee will have related
   programs filed in the To Be Scheduled file.)

o Enrollment into Medical Programs—The user can enter or modify
   program enrollment data as desired based on requests for "job-
   related" enrollments or need to modify system actions on exposures,
   audits, and discrepancy reports. The data includes reexamination
   frequency, date of next exam, reason for enrollment, exam type, and
   enrollment type. If the date of next exam is in the current month,
   the program will be filed in the To Be Scheduled file.

o Remove Employees from Medical Programs—The user can enter or
   correct program removal data. As with enrollment data updating, the
   user will mainly use this function in response to requests or to
   system actions. The data that can be edited includes the reason for
   removal and, if desired, a removal exam date. If a removal exam
   date is specified for the current month, the program will be filed
   in the To Be Scheduled file.

   Use of these functions should allow users to ensure consistent
   medical surveillance with little effort and maximum flexibility. In
   addition, the automated enrollments based on personnel actions and
   exposure entry will free users to focus on special cases and will
   decrease the time lags currently experienced before new hires are
   examined.

3.4 Schedule Appointments

   The Schedule Appointments process (Figure 3-3) is used to enter data
needed to schedule employee medical appointments. The following functions
are available:

o Clinic Table Entry/Edit—This function enables the user to define a
   clinic and to specify the scheduling system to be used by each
   clinic. If the user selects automatic scheduling, the system will
   collect data on the start and end of a typical clinic day and the
   length of time slots to be used. The system will then generate a
   generic Monday through Friday schedule using the entered parameters.

   The user will modify this weekly template by specifying the time slot
capacities, i.e., the number of people the clinic can handle for each time
slot. Individual time slots can also be reserved for employees from a

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│ APPOINTMENTS│
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   ┌───┴────────────────────────────────┐
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   ├───┤  CLINIC TABLE    │    │   ENTER/EDIT     │
   │   │   ENTRY/EDIT     ├────┤    EMPLOYEE      │
   │   └──────────────────┘    │     TO BE        │
   │                           │   SCHEDULED      │
   │                           └──────────────────┘
   │
   │   ┌──────────────────┐    ┌──────────────────┐
   ├───┤ GENERATE CLINIC  │    │    SCHEDULE      │
   │   │ MONTHLY TEMPLATE ├────┤  APPOINTMENTS    │
   │   └──────────────────┘    │   FROM TO BE     │
   │                           │   SCHEDULED      │
   │                           └──────────────────┘
   │
   │   ┌──────────────────┐    ┌──────────────────┐
   ├───┤    MONTHLY       │    │     DIRECT       │
   │   │   SELECTION      ├────┤  APPOINTMENT     │
   │   └──────────────────┘    │  SCHEDULING/     │
   │                           │  RESCHEDULING    │
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   │
   │   ┌──────────────────┐    ┌──────────────────┐
   ├───┤    MONTHLY       │    │    MONTHLY       │
   │   │   SCHEDULING     ├────┤ SCHEDULE KILL    │
   │   │(FILLED TIME SLOTS)│   │ AND TBS REFILE   │
   │   └──────────────────┘    └──────────────────┘
   │
   │   ┌──────────────────┐
   └───┤    MONTHLY       │
       │   SCHEDULING     │
       │(BLANK TIME SLOTS)│
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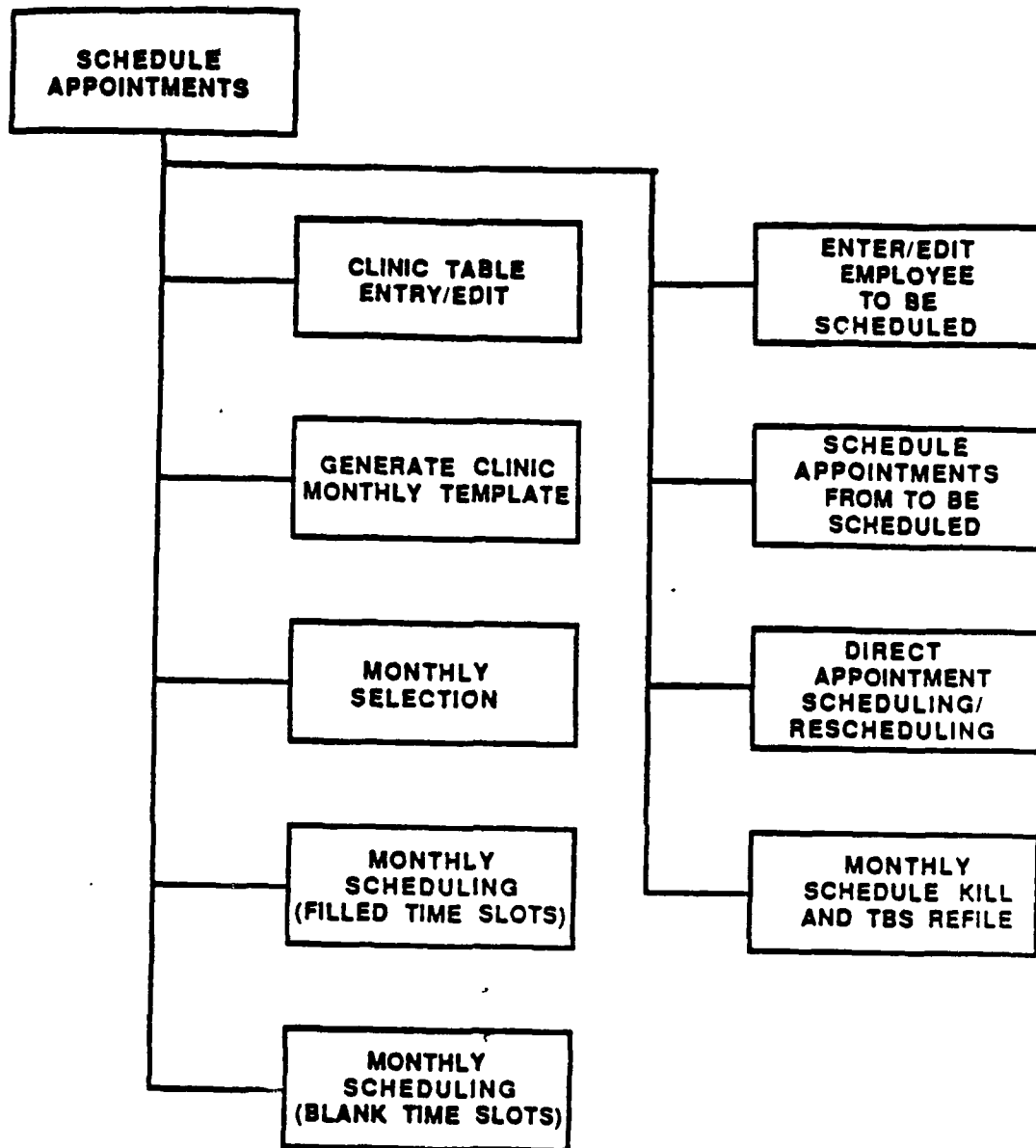
FIGURE 3-3
SCHEDULE APPOINTMENTS PROCESS

specified shift or requiring examination for a specified "preferred"
program such as an exam needing the presence of a special
practitioner who is only available one morning a week.

o Generate Clinic Monthly Template--Under this function, the system
uses the weekly template created for a clinic using automated
scheduling to generate an empty schedule for the month, which can
then be modified by designating holidays, administrative days, or
administrative time slots or by changing the time slot capacities,
shifts, or program preferences. This function can be reused at any
time to modify time slot or day parameters for a future date.

o Monthly Selection--For a clinic with a manual scheduling option, the
system reviews all employee records, identifying those with programs
having a date of next exam in a user specified month, and filing
those programs in the To Be Scheduled file. This function can only
be performed once monthly.

o Monthly Scheduling (Filled Time Slots)--For a clinic with an
automated scheduling option, the system will do monthly selection as
described above and then will schedule any entries that are in the
To Be Scheduled file. In doing the scheduling, the system will
first add to an existing appointment for the employee. If there is
no existing appointment, the system will search through the
scheduling month specified by the user until it finds an available
time period long enough to handle the programs needing scheduling
and matching the employee's shift and program preferences. If an
appointment is scheduled, the To Be Scheduled entry is deleted.
While the Monthly Selection can only be done once for a month, the
scheduling step can be rerun multiple times.

o Monthly Scheduling (Blank Time Slots)--This function is similar to
Monthly Scheduling (Filled Time Slots), except that the clinic is
specifying that, while the system will automatically generate a
suggested schedule, shops will be determining the ultimate
schedule. Once the user indicates that an acceptable suggested
schedule has been created, the system will print the Blank
Appointment List and Personnel Requiring Exams reports and move the
appointment data back into the To Be Scheduled file.

o Enter/Edit Employees To Be Scheduled--This function allows the user
to enter programs for subsequent scheduling and to modify employee
program data already in the To Be Scheduled file.

o Schedule Appointments from To Be Scheduled--Under this function, the
user can select an employee with programs in the To Be Scheduled
file and either schedule a new appointment or add the programs to an
existing appointment.

o Direct Scheduling/Rescheduling—This function allows the user to enter or change appointment data on date, time, reason for visit, whether the visit is initial or follow-up, and program data for the visit.

o Monthly Schedule Kill and TBS Refile—This function enables the user to move all appointments made for a specified month in an automated scheduling system into the To Be Scheduled file. If the schedule had significant problems, this would allow the user to make major changes to the monthly schedule template and then rerun either version of automated scheduling.

Use of this part of the module should reduce clerical scheduling efforts, particularly if the clinic uses automated scheduling. In addition, the monthly selection function will ensure that employees in need of medical surveillance will be identified and scheduled. Since scheduling, and changes in scheduling, will result in system-generated appointment notices, use of the module should reduce the number of missed appointments. Where shops do the scheduling, the number of shop-cancelled appointments and employee-missed appointments should decline.

3.5 Update Appointment History

The Update Appointment History process (Figure 3-4) is used to record data on missed, cancelled, and attended appointments, the results of program examinations, program qualification statuses, the date the next periodic exam is due, and employee time spent in the clinic. The following functions are available:

o Cancel Individual Medical Appointments—Under this function the user can enter or modify a cancelled appointment or flag a future scheduled appointment as cancelled, with the option to reschedule it now or file the programs in the To Be Scheduled file for later rescheduling. The user must indicate whether the shop or the clinic cancelled the appointment.

o Block Cancellation of Medical Appointments—The user can specify a date and a starting and ending time for which all appointments starting during one of the included time slots will be cancelled and, if desired, the programs will be filed in the To Be Scheduled file. For a clinic using automated scheduling, the file can also specify that the time slots covered be made unavailable for scheduling.

3-8

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                    ┌──────────────┐
                    │   UPDATE     │
                    │ APPOINTMENT  │
                    │   HISTORY    │
                    └──────┬───────┘
                           │
                           │        ┌──────────────────┐
                           ├────────│ CANCEL INDIVIDUAL│
                           │        │     MEDICAL      │
                           │        │   APPOINTMENTS   │
                           │        └──────────────────┘
                           │
                           │        ┌──────────────────┐
                           ├────────│      BLOCK        │
                           │        │  CANCELLATION    │
                           │        │     MEDICAL      │
                           │        │   APPOINTMENTS   │
                           │        └──────────────────┘
                           │
                           │        ┌──────────────────┐
                           ├────────│     MISSED        │
                           │        │  APPOINTMENTS    │
                           │        └──────────────────┘
                           │
                           │        ┌──────────────────┐
                           ├────────│     RECORD        │
                           │        │   ATTENDED       │
                           │        │  APPOINTMENTS    │
                           │        └──────────────────┘
                           │
                           │        ┌──────────────────┐
                           └────────│      EXAM         │
                                    │    RESULTS       │
                                    │  ENTRY/EDIT      │
                                    └──────────────────┘
```
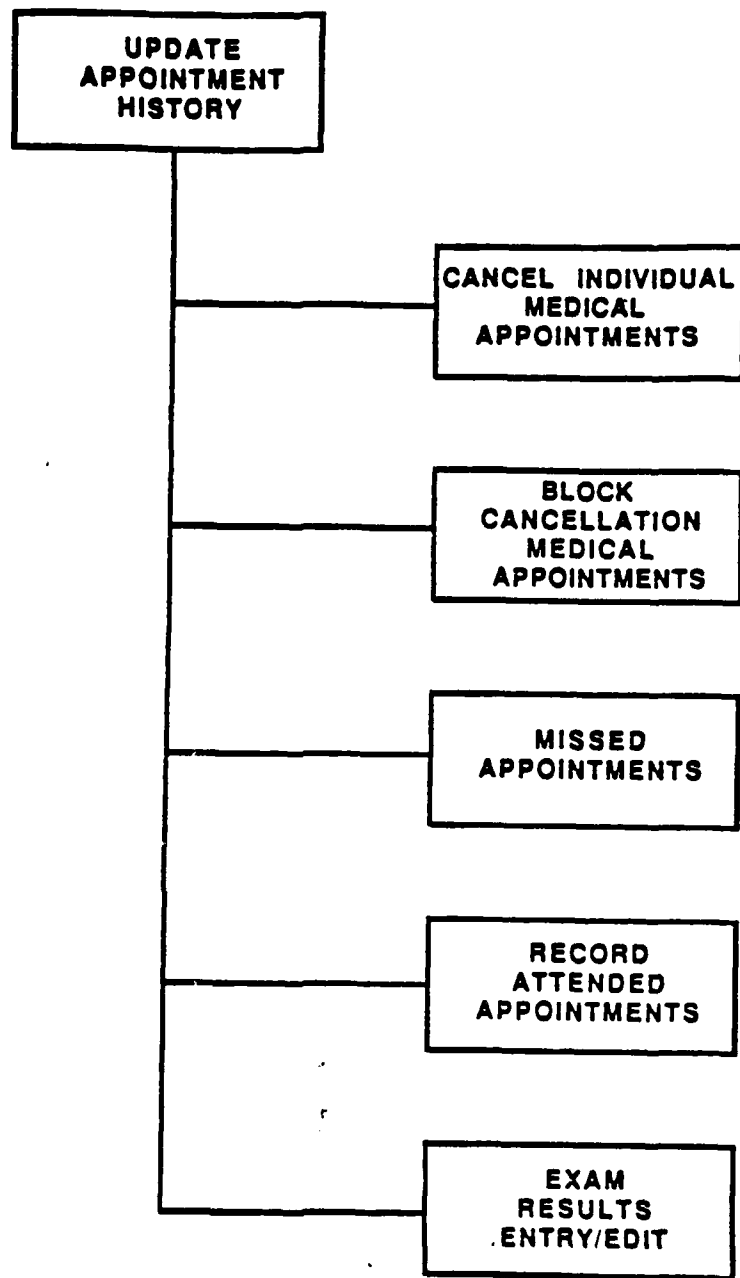
FIGURE 3-4
UPDATE REQUIREMENTS PROCESS

o Missed Appointments--This function allows the user to enter or
   modify a missed appointment or to flag a past scheduled appointment
   as missed, with the option to reschedule it now or file the programs
   in the To Be Scheduled file for later rescheduling. The user can
   also use this function to enter a missed appointment justification.
   For an employee having excessive consecutive missed appointments as
   defined for the clinic, the system will remove the employee from all
   programs except asbestos.

o Record Attended Appointments--Under this function, the user can
   enter or modify attended appointment data or create an attended
   appointment record from a past scheduled appointment. The user must
   indicate whether the appointment was scheduled or unscheduled and
   the time the employee entered the clinic. The system will file
   "pending" as the exam result for all programs in the appointment and
   as the employee's program qualification status on the date of the
   exam.

o Exam Results Entry/Edit--This function allows the user to enter or
   modify the times the employee entered and left the clinic and
   program exam results. For "incomplete" program results, the user
   must enter the reason incomplete, and the system will file the
   program in the To Be Scheduled file for a follow-up exam. For
   programs with periodic exam results of "qualified," or "not
   qualified" the system will increment the enrollment date next exam
   by the reexamination frequency, and the user will be allowed to
   modify this date. When there is no current enrollment, or only a
   one-time enrollment and the exam is periodic, the user will be
   allowed to enroll the employee in the program. The user will also
   be allowed to remove an existing one-time enrollment or modify the
   date next exam from this function.

   These functions should increase the accuracy and availability of
employee qualification data. The number of missed and cancelled
appointments should be reduced by increased management ability to hold shops
and clinics accountable and by the forced removal of certification for
employees who habitually miss appointments. Exam results should be
available sooner and be more accessible to management and clinic staff.

3.6 Audit Files

The Audit Files process (Figure 3-5) will provide a system check on data integrity for schedules and for qualification data. The following two functions should be run daily:

o Schedule Audit--This function will review the schedule for past due appointments that have not been recorded as cancelled, missed, or attended. Appointments that are older than the clinic-specified grace period will be treated as missed appointments.

o Qualification Audit--This function reviews employee periodic program enrollments for expiration dates that are past the clinic-allowed grace period. For such enrollments, the system will file a "not qualified" in the employee's program qualification status. Also, if the system locates an asbestos program enrollment for which the employee is older than 45, it will change the program reexamination frequency from sixty months to twelve months and will adjust the date of the next exam appropriately.

The Audit functions will improve the accuracy of qualification data and missed appointment data with no clerical effort. In addition, the automatic maintenance of asbestos program enrollments frequency will ensure adequate surveillance under this program.

3.7 Maintain Reference Files

Many of the data input questions (referred to as "prompts") require the data entry person to select a term from a controlled vocabulary of terms, e.g., selecting an occupation from a list of occupations. These controlled vocabularies are stored in reference files. The local System Manager will use the Maintain Reference Files processes (Figure 3-6) to create or update the reference files described in Table 3-1. The Preexam Instructions file, Medical Program Tests file, and Appointment Notices file will be modified by the local System Manager working in conjunction with the clinics using the systems.

In addition to these Reference files, the module uses six Administration module files as reference files. The Agency Unit file is used to look up agencies and subordinate units for reporting. The Employee file is used to identify personnel during data entry and reporting. The Location, Operation, Occupation, and Stressor file entries are linked by this module to Medical Program file entries to establish medical surveillance requirements.
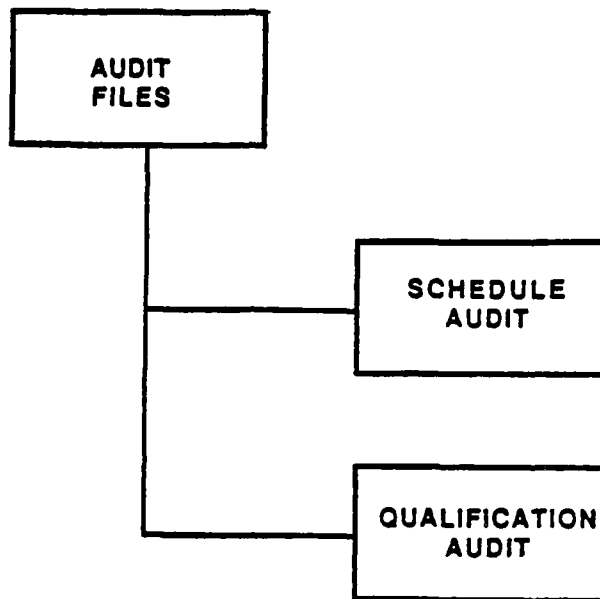
**FIGURE 3-5
AUDIT FILES PROCESS**

```
                    ┌─────────────────┐
                    │    MAINTAIN     │
                    │   REFERENCE     │
                    │      FILES      │
                    └────────┬────────┘
                             │
                             │          ┌─────────────────┐
                             ├──────────│   APPOINTMENT   │
                             │          │  NOTICES FILE   │
                             │          │   ENTER/EDIT    │
                             │          └─────────────────┘
                             │
                             │          ┌─────────────────┐
                             ├──────────│     PREEXAM     │
                             │          │ INSTRUCTIONS FILE│
                             │          │   ENTER/EDIT    │
                             │          └─────────────────┘
                             │
                             │          ┌─────────────────┐
                             └──────────│ MEDICAL PROGRAM │
                                        │   TESTS FILE    │
                                        │   ENTER/EDIT    │
                                        └─────────────────┘
```
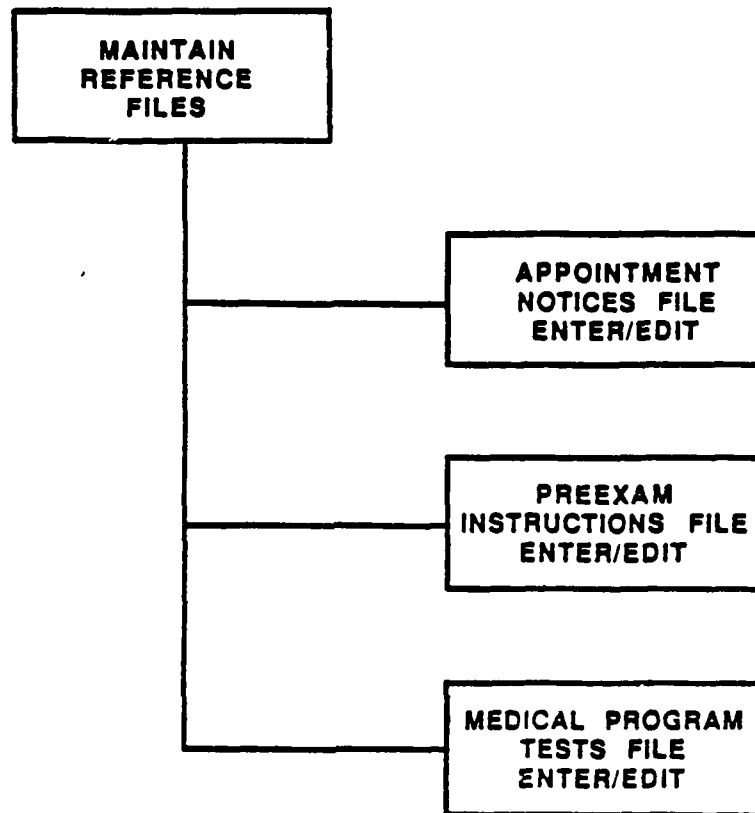
FIGURE 3-6
MAINTAIN REFERENCE FILES PROCESS

TABLE 3-1
MEDICAL EXAM SCHEDULING REFERENCE FILES

FILE NAME	FILE CONTENTS
Appointment Notices File	The appointment notice format specifying the test and the data items to be inserted from the Employee, Medical Appointment, and Preexam Instruction files.
Preexam Instructions File	Categories of instructions to appear on the employees' appointment notices.
Medical Program Tests File	The full exam protocol stored in hierarchical structure. Each item has a name, number, and an ascendant entry under which it is always listed.

4.0 MEDICAL EXAM SCHEDULING MODULE OUTPUT PROCESSES

4.1 Summary of Output Processes

The MES module contains many menu options that enable the user to obtain needed information from the module. These options can be grouped into processes, where each provides a specific type of information. The MES module has the following four output processes:

o   Produce Management Reports

o   Produce Clinic Reports

o   Produce Discrepancy Reports

o   Produce Program Linkage Displays

The Produce Management Reports process generates reports for use by agency, clinic, and OSH management in evaluating employee qualifications, program requirements, examination costs, and the effectiveness of agency and clinic attendance policies and procedures. The Produce Clinic Reports process provides the clinics, shops, and employees with information needed to schedule, modify, and conduct appointments. The reports available through the Produce Discrepancy Reports process alert users to possible problems in the medical enrollment data, which can then be corrected as deemed necessary. The Produce Program Linkage Displays process provides data needed to evaluate employee enrollment needs.

4.2 Produce Management Reports

The following reports are generated by the Produce Management Reports process (Figure 4-1).

o   Qualification Status Report--This report is sorted by shop and employees for a selected agency. It lists the employee's current qualification statuses for the medical programs in which the employee is enrolled and the training courses for which the employee should be qualified. The user can run this report for medical programs only, training courses only, or both.

o   Removal Report--This report is sorted and selected by agency, shop, and employee. It shows any of the medical programs from which an employee has been removed during a user-specified date range, including the date removed, reason removed, and enrollment type (required, job-related, or personal).
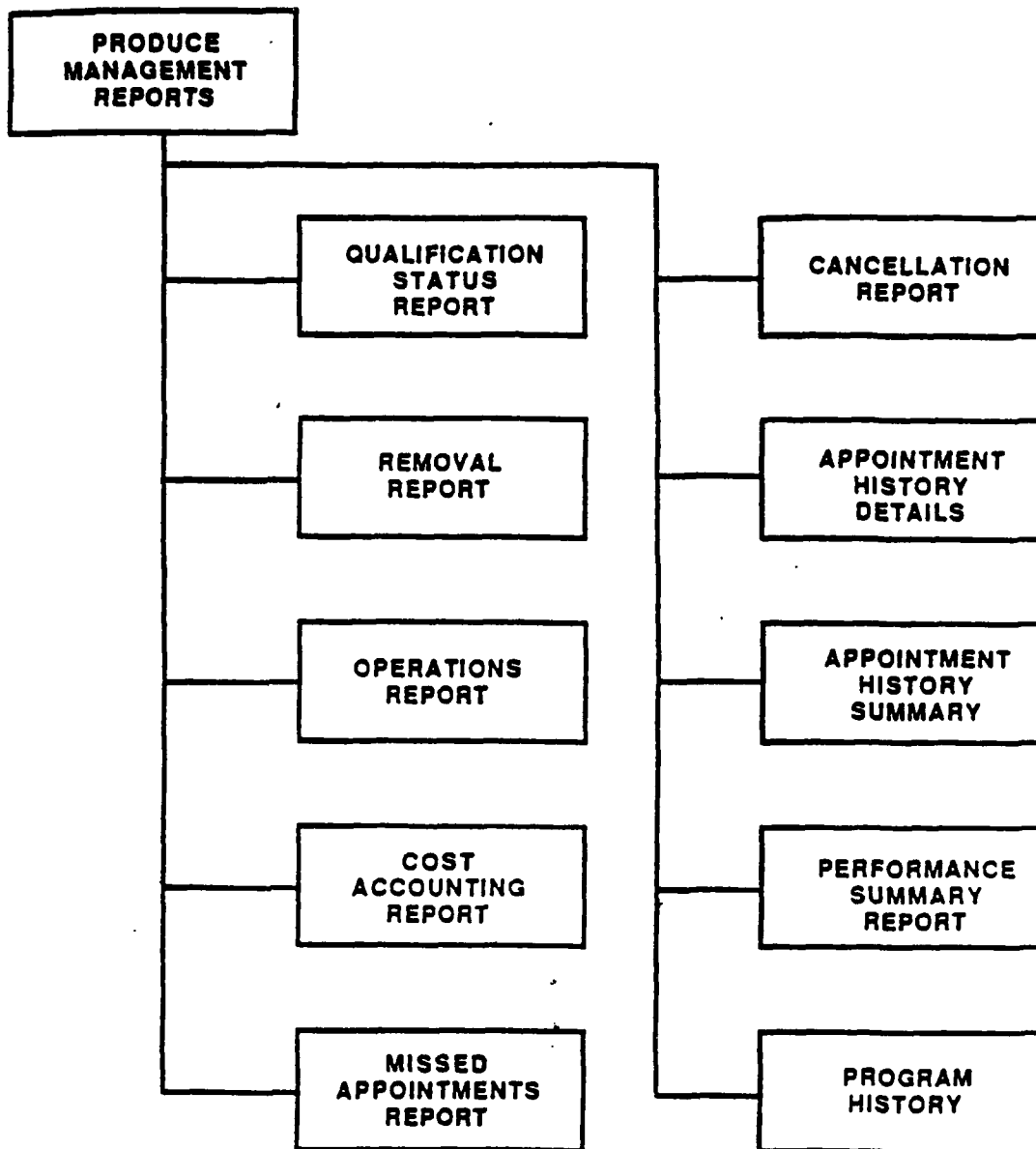
FIGURE 4-1
PRODUCE MANAGEMENT REPORTS PROCESS

o **Operations Report**--This report is selected and sorted by operation and includes a list of the medical programs in which employees should be enrolled if they are performing an operation. A copy of the report is produced for each shop in the user-specified agency.

o **Cost Accounting Report**--This report provides cost estimates of employee time spent getting clinic exams for a user-specified agency or shop during a selected date range. Total exam times and estimated shipyard travel time between the shop and clinic are multiplied by the employee's wage and summarized by shop. The report also lists identifying information on medical appointments or which the time in, time out, or employee wage rate are missing.

o **Missed Appointments Report**--This report lists employees in a selected agency or shop who have missed appointments within a given date range. It also provides any available justification for missing the appointment. A summary of the number of scheduled and missed appointments for the shop and the number that were and were not justified is also provided.

o **Cancellation Report**--This report lists employees in a selected agency or shop who have had an appointment cancelled in the user-specified date range. The report also provides shop totals with a breakdown for shop cancellations and clinic cancellations.

o **Appointment History Details**--This report lists details on scheduled appointments during a specified date range, including employee data, the medical programs covered, and any exam results. The report is selected and sorted by employee, shop, or occupation, with additional selection on program and on disposition (missed, cancelled, or attended).

o **Appointment History Summary**--This report provides counts of the attended, missed, and cancelled appointments in a specified date range for each shop in a selected agency with summary totals for the agency. In addition, the missed appointments are subtotalled by justified and unjustified missed appointments, and the cancelled appointments are subtotalled by clinic-cancelled and shop-cancelled appointments.

o **Performance Summary Report**--This report summarizes, for a selected clinic and agency (sorted by selected medical programs), the number of attended, missed, and cancelled appointments within a user-specified date range. It also summarizes the number of

incomplete exams and the reason each exam was incomplete. The report can be limited to scheduled or unscheduled appointments if desired.

o Program History--This report details the most recent enrollment and removal data for any medical programs in which the specified employee has ever been enrolled.

Examples of these reports are included in Appendix A.

The Qualification Status Report will enable shop supervisors to identify employees' current medical program and training course qualifications and requalification needs. The Removal Report will allow shop supervisors to identify instances when employees need to be re-enrolled in necessary medical programs and to correct trends in removals caused by management or employee actions. The Operations Report will help shop supervisors plan ahead and ensure that they have properly qualified employees for operations that are new or have new requirements. Management will use the Cost Accounting Report to identify trends and problems of lengthy, costly absences for medical surveillance in a specific shop or within an agency. Management will use the Missed Appointments Report and the Cancellation Report to reduce the number of appointments not attended by tracking the reasons for cancelled and missed appointments. The Appointment History Details Report on employee, shop, or occupation can be used by managers and clinics to review attendance performance or to determine whether changes are needed in program requirements. The Appointment History Summary Report and the Performance Summary Report will help the clinics identify trends in appointments attended, missed, and cancelled, which can be further traced using the Appointment History, Missed Appointments, and Cancellation reports.

4.3 Produce Clinic Reports

The Produce Clinic Reports process generates the following outputs (Figure 4-2):

o Personnel Requiring Exams--This report lists employees for a given clinic who need to be scheduled for medical evaluation in one or more medical programs; the information is selected by agency and employee and sorted by shop.

o Available Capacity Grid--This display shows the availability of appointment time slots for a user selected clinic, date range, and time range.

4-4
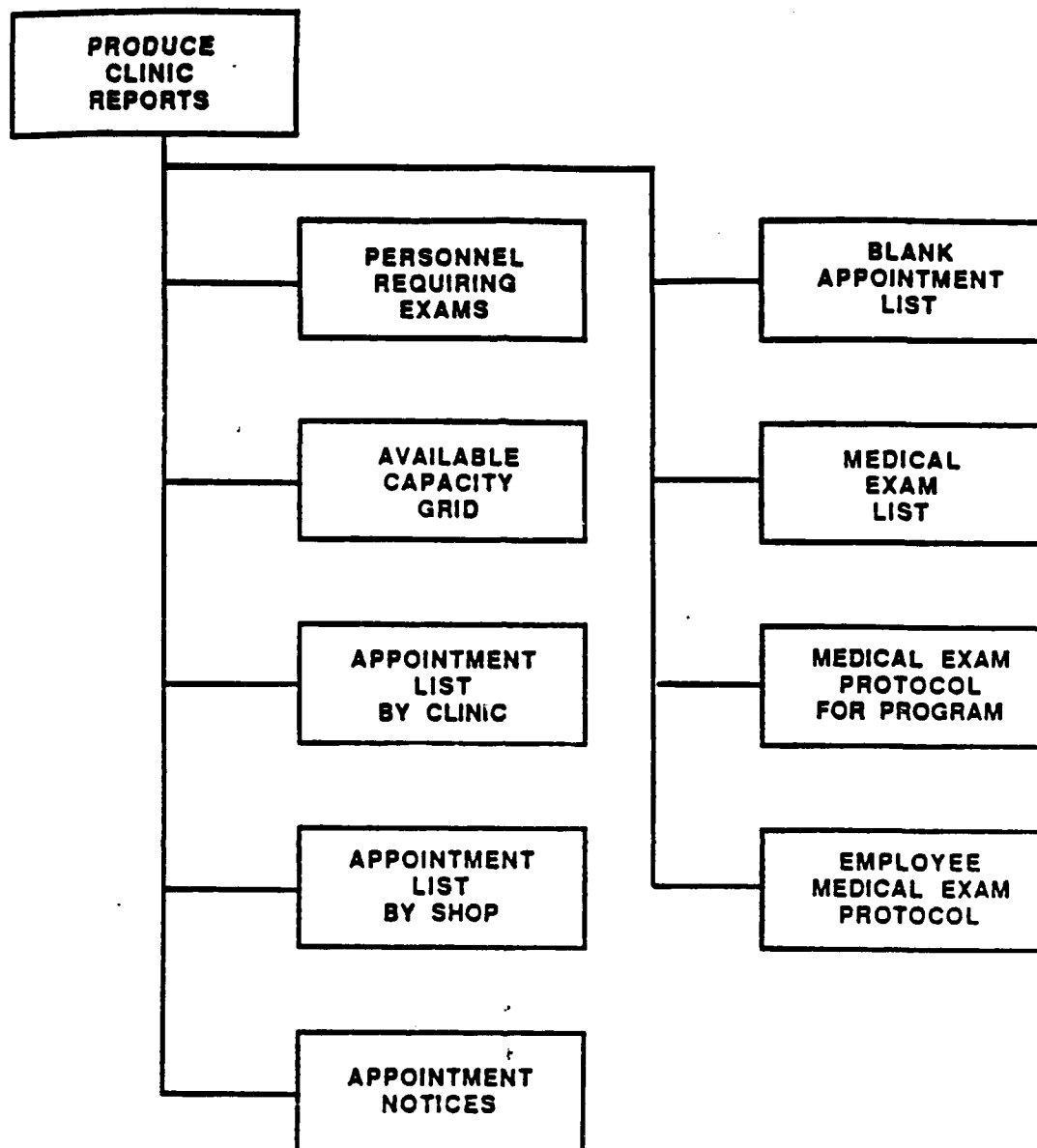
FIGURE 4-2
PRODUCE CLINIC REPORTS PROCESS

o Appointment List by Clinic—This report shows employee and medical
   program data on appointments for a selected clinic and date/time
   range, sorted by date and time.

o Appointment List by Shop—This report is essentially the same as the
   Clinic Appointment List except that the appointments listed are
   selected and sorted by agency and shop.

o Appointment Notices—Each notice identifies the employee, shop, and
   appointment date and time and provides instructions on eating,
   smoking, and other behavior that the employee must limit prior to
   the appointment. The user may select the notices by agency, shop,
   and employee.

o Blank Appointment List—This report lists available appointments
   allocated to each shop by the selected clinic. The report has room
   for the shops to fill in employee data.

o Medical Exam List—This report describes the protocol of all medical
   exams performed by the clinic. It includes medical history,
   physical exam, and laboratory test items and lists any gender
   restrictions.

o Medical Exam Protocol for Program—This list contains the history,
   physical exam, and lab test protocol that is standard for a selected
   medical program, including any age and gender restrictions that
   apply and the exam types (baseline, periodic, or removal) which use
   each item.

o Employee Medical Exam Protocol—This report is selected by clinic,
   date, and time or by specific appointment. For each appointment it
   provides employee demographic data, exposures within the past year,
   and an unduplicated exam protocol appropriate for the appointment
   programs, program exam types, and employee's age and gender.

Examples of these reports are included in Appendix B.

The Available Capacity Grid will aid clinic personnel in determining
when to schedule appointments and in modifying the automated scheduling
parameters. The Appointment List by Clinic will enable clinic personnel to
identify attended and missed appointments.

The Appointment List by Shop and Appointment Notices will help reduce
the number of missed and incomplete appointments by alerting the shops and
employees of appointments and informing employees of fasting or other

requirements that must be met to ensure valid testing. The Blank
Appointment List and Personnel Requiring Exams report will enable the shops
to schedule appointments, while allowing the system to allocate the
available appointments as appropriate for the clinic and ensuring that all
shop personnel are not sent to the clinic at the same time. The Personnel
Requiring Exams report will also assist the clinics that do automated or
manual scheduling by providing data on employees that have not yet been
scheduled. The Medical Exam Protocol, Medical Exam List for Program, and
Employee Medical Exam Protocol will allow the clinics to specify standard
protocols and will ensure that physicians are aware of the exams appropriate
to a specific employee's visit in an organized, unduplicated format.

4.4 Product Discrepancy Reports

The Produce Discrepancy Reports process (Figure 4-3) generates the
following:

o Report of Date Next/Birth Month Discrepancies--This report lists
employees enrolled in medical programs with a projected Next Exam
Date that is not in phase with the employee's birthdate and
reexamination frequency. The report is selected by agency and
sorted by employee.

o Discrepancy Audit of Personnel File--This report shows changes
needed in employee's enrollment to coincide with the programs
required by the employee's occupation. The system also checks for
invalid reexamination frequencies. The report is selected by agency
and sorted by employee.

o Discrepancy Audit for Program/Occupation Changes--This report
provides data by employee on enrollment changes made as a result of
modifications in Occupation/Program requirements or in program
frequencies or status. It also lists discrepancies that could not
be resolved by the system.

Examples of these reports are included in Appendix C.

The Report of Date Next/Birth Month Discrepancy will enable users to
reduce employee visits to clinics by alerting them to enrollment data that
conflicts with the practice of coordinating exams by birthmonth. The
Discrepancy Audit of Personnel File will provide management oversight of
employee enrollment to ensure that employees are enrolled in required
medical surveillance programs. The Program/Occupation Changes Discrepancy
Audit is automatically produced by the system to document the effects of
changes to major files on employee medical surveillance and to provide
management with information needed to rectify any resultant or unresolved
problems.
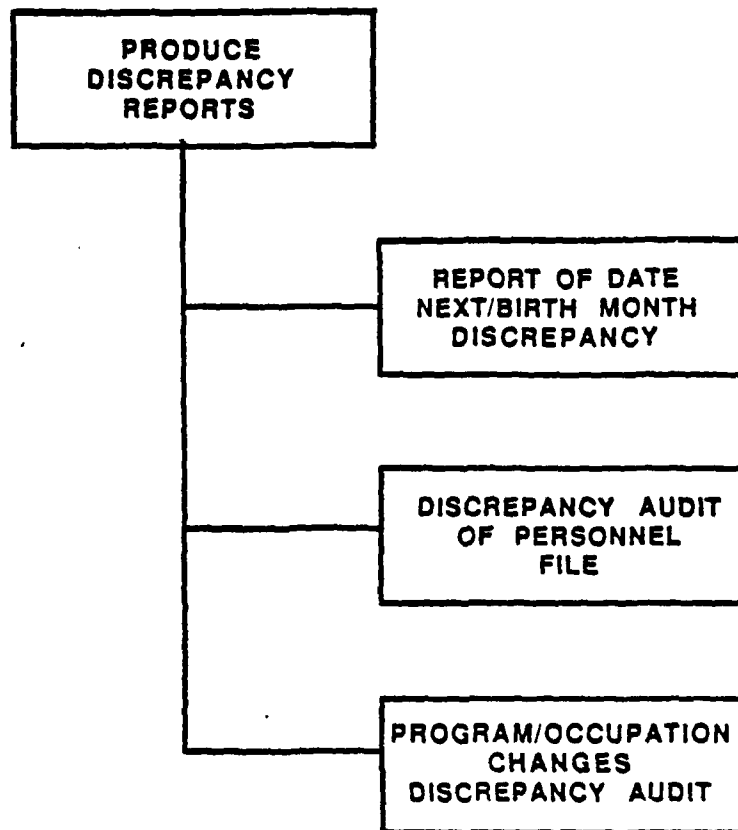
FIGURE 4-3
PRODUCE DISCREPANCY REPORTS PROCESS

4-8

4.5 Produce Program Linkage Displays

The following displays and reports are produced by this process (Figure 4-4):

o Location/Medical Program Display--This display shows medical programs that are associated with specific locations in the facility. The display may be sorted by location or by program. The user may specify either a single location or program, or all locations or programs.

o Operation/Medical Program Display--This display lists medical programs that are associated with specific operations in the facility. The display may be sorted by operation or by program. The user may specify either a single operation or program, or all operations or programs.

o Occupation/Medical Program Display--This display shows medical programs that are associated with specific occupations in the facility. The display may be sorted by occupation or by program. The user may specify either a single occupation or program, or all occupations or programs.

o Stressor/Medical Program Display--If selected by stressor, this display details data on a specific stressor and the medical programs and training courses that are associated with the stressor. The user can specify a single stressor, all stressors, or a class of stressors. The user can specify a single program or all programs. In the latter case, the display shows all stressors associated with a specific program, sorted by program.

Examples of these reports appear in Appendix D.

The Program Linkage displays provide management with data that can be used to ensure that employees new to a location, operation, occupation, or stressor receive needed baseline exams and are enrolled in appropriate medical surveillance programs. When the employee shows up as a walk-in prior to an occupation change or after an exposure, clinics can use the Occupation/Medical Program and Stressor/Medical Program displays to determine the programs for which an employee should be examined. Supervisors can use the Operation/Medical Program and Location/Medical Program displays to identify medical surveillance needed by employees moved to a new location or beginning to perform an operation.

4-9

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┌─────────────────┐
│    PRODUCE      │
│ PROGRAM LINKAGE │
│    DISPLAYS     │
└────────┬────────┘
         │
         │      ┌─────────────────┐
         ├──────│ LOCATION/MEDICAL│
         │      │     PROGRAM     │
         │      │     DISPLAY     │
         │      └─────────────────┘
         │
         │      ┌─────────────────┐
         ├──────│OPERATION/MEDICAL│
         │      │     PROGRAM     │
         │      │     DISPLAY     │
         │      └─────────────────┘
         │
         │      ┌──────────────────┐
         ├──────│OCCUPATION/MEDICAL│
         │      │     PROGRAM      │
         │      │     DISPLAY      │
         │      └──────────────────┘
         │
         │      ┌─────────────────┐
         └──────│ STRESSOR/MEDICAL│
                │     PROGRAM     │
                │     DISPLAY     │
                └─────────────────┘
```
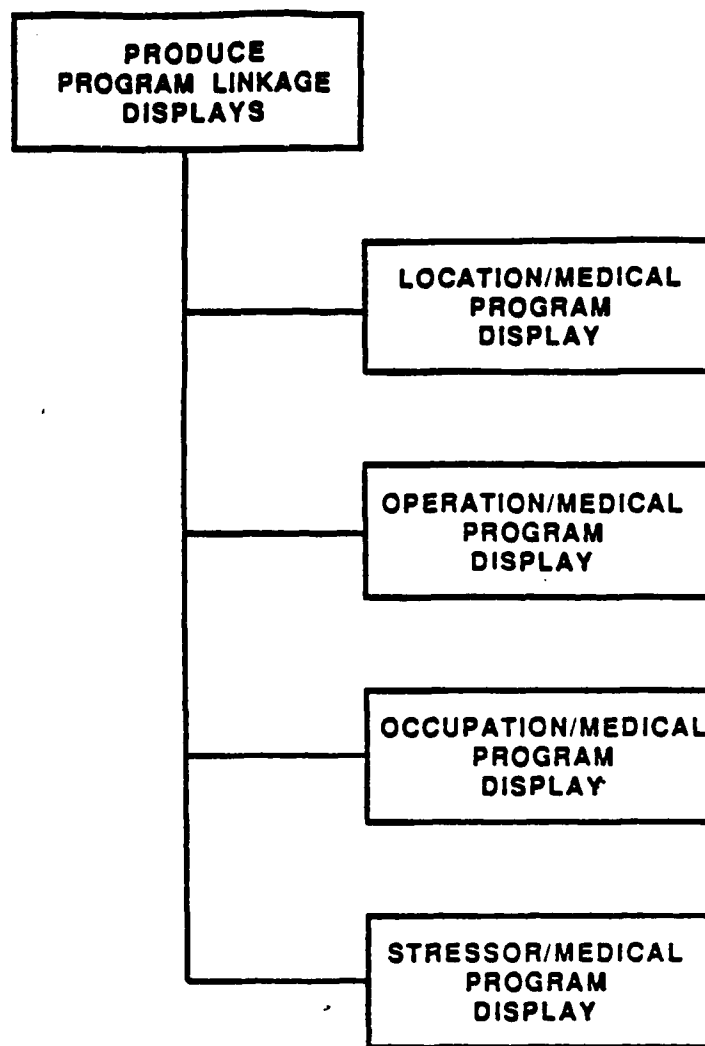
FIGURE 4-4
PRODUCE PROGRAM LINKAGE DISPLAYS PROCESS

APPENDIX A

EXAMPLES OF OUTPUTS FROM
PRODUCE MANAGEMENT REPORTS PROCESS

QUALIFICATION STATUS REPORT   AGENCY: MINS   MEDICAL AND TRAINING
THIS REPORT MS INFORMATION PROTECTED BY THE PRIVACY ACT OF 197
NAME   SSN   BADGE   SHIFT   BIRTHD.   JOB TITLE
                                             SHOP

AGENCY

SHOP: 106.2

MADISON,JAMES   784453333 7667   EVENING MAR 4,1909 MGJ722 COLD WORKER
                                                        106.2

MINS CODE		MEDICAL PROGRAM NAME	FREQ	QUAL. STATUS	EXPIRES
09	R	HEARING	12	NOT QUALIFIED	JUL 29,1986
40	R	RESPIRATORY PROTECTION	12	NOT QUALIFIED	JUL 29,1986
1.		TRAINING COURSE		QUAL. STATUS	RETRAIN
MOSL-04-112		PROPER PACKAGING		NOT QUALIFIED	JUL 23,1986

MANCHESTER,MELLISA   000000009 1801   DAY   MAY 2,1948 GS0018 SAFETY & OCCUPATIONAL HEALTH M
                                                        106.2

MINS CODE		MEDICAL PROGRAM NAME	FREQ	QUAL. STATUS	EXPIRES
08	R	CHROMIUM	15	QUAL. STATUS	MAY 3,1987
09	R	HEARING	12	NOT QUALIFIED	JUL 29,1986

MARX,GROCHO   575557777 222222   EVENING JUN 30,1948 GS0490 INDUSTRIAL HYGIENE
                                                        106.2

MINS CODE		MEDICAL PROGRAM NAME	FREQ	QUAL. STATUS	EXPIRES
02	R	ASBESTOS	60	NOT QUALIFIED	JUL 29,1986
09	R	HEARING	12	NOT QUALIFIED	JUL 29,1986
40	R	RESPIRATORY PROTECTION	12	NOT QUALIFIED	JUL 29,1986
16	R	SIGHT CONSERVATION	24	NOT QUALIFIED	JUL 29,1986
25	R	SOLVENTS	12	NOT QUALIFIED	JUL 31,1986

MOUSE,MICKEY   599105555 765876   DAY   JUL 1,1951 GS0490 INDUSTRIAL HYGIENE
                                                        106.2

MINS CODE		MEDICAL PROGRAM NAME	FREQ	QUAL. STATUS	EXPIRES
02	R	ASBESTOS	60	NOT QUALIFIED	JUL 29,1986
09	R	HEARING	12	NOT QUALIFIED	JUL 29,1986
40	R	RESPIRATORY PROTECTION	12	NOT QUALIFIED	JUL 29,1986
16	R	SIGHT CONSERVATION	24	NOT QUALIFIED	JUL 29,1986
25	R	SOLVENTS	12	NOT QUALIFIED	JUL 31,1986

NIXON,RICHARD   799467777 030393   EVENING JUL 7,1934 GS0018 SAFETY & OCCUPATIONAL HEALTH M
                                                        106.2

MINS CODE		MEDICAL PROGRAM NAME	FREQ	QUAL. STATUS	EXPIRES
08	R	CHROMIUM	15	NOT QUALIFIED	JUL 30,1986
09	R	HEARING	12	NOT QUALIFIED	JUL 29,1986

FALBY,PATTI   580888888 777777   EVENING SEP 1,1966 GS0490 INDUSTRIAL HYGIENE
                                                        106.2

MINS CODE		MEDICAL PROGRAM NAME	FREQ	QUAL. STATUS	EXPIRES
02	R	ASBESTOS	60	NOT QUALIFIED	JUL 29,1986
09	R	HEARING	12	NOT QUALIFIED	JUL 29,1986
40	R	RESPIRATORY PROTECTION	12	NOT QUALIFIED	JUL 29,1986
16	R	SIGHT CONSERVATION	24	NOT QUALIFIED	JUL 29,1986
25	R	SOLVENTS	12	NOT QUALIFIED	JUL 31,1986

SHAVER,ROBERT   572221117 616323   DAY   AUG 8,1958 GS0490 INDUSTRIAL HYGIENE
                                                        106.2

MINS CODE		MEDICAL PROGRAM NAME	FREQ	QUAL. STATUS	EXPIRES
02	R	ASBESTOS	60	NOT QUALIFIED	JUL 29,1986
09	R	HEARING	12	NOT QUALIFIED	JUL 29,1986
40	R	RESPIRATORY PROTECTION	12	NOT QUALIFIED	JUL 29,1986
16	R	SIGHT CONSERVATION	24	NOT QUALIFIED	JUL 29,1986

EMPLOYEE NAME	SSN	BADGE	SHIFT	BIRTHDATE	OCCUP. JOB TITLE
FISK,BONNIE	588904848	969686	DAY	DEC 24,1954	WG3502 LABORING

CODE	PROGRAM	REMOVED	REASON REMOVED	TYPE
04	LEAD	JUL 31,1986	SET UP FOR SCHEDULING	PERSONAL
04	LEAD	JUL 30,1986	SET UP FOR SCHEDULING	PERSONAL
38	VISION (NEAR VISION)	JUL 31,1986	SET UP FOR SCHEDULING	PERSONAL
38	VISION (NEAR VISION)	JUL 30,1986	SET UP FOR SCHEDULING	PERSONAL
33	BENZENE	JUL 31,1986	SET UP FOR SCHEDULING	PERSONAL
33	BENZENE	JUL 30,1986	SET UP FOR SCHEDULING	PERSONAL

EMPLOYEE NAME	SSN	BADGE	SHIFT	BIRTHDATE	OCCUP. JOB TITLE
FORD,GERALD	777117777	8934934	DAY	AUG 30,1961	DS1311 PHYSICAL SCIENCE TECHNICIAN

CODE	PROGRAM	REMOVED	REASON REMOVED	TYPE
08	CHROMIUM	JUL 31,1986	EXCEEDED ALLOWED NUMBER OF MISSED APPOIN	PERSONAL
08	CHROMIUM	JUL 29,1986	SET UP FOR SCHEDULING	JOB RELATED
09	HEARING	JUL 29,1986	I FELT LIKE IT	REQUIRED
10	HYDROCARBONS	JUL 31,1986	EXCEEDED ALLOWED NUMBER OF MISSED APPOIN	PERSONAL
04	LEAD	JUL 31,1986	SET UP FOR SCHEDULING	PERSONAL
04	LEAD	JUL 30,1986	SET UP FOR SCHEDULING	PERSONAL
40	RESPIRATORY PROTECTION	JUL 31,1986	EXCEEDED ALLOWED NUMBER OF MISSED APPOIN	REQUIRED
25	SOLVENTS	JUL 31,1986	EXCEEDED ALLOWED NUMBER OF MISSED APPOIN	PERSONAL
37	VISION (COLOR)	JUL 31,1986	EXCEEDED ALLOWED NUMBER OF MISSED APPOIN	REQUIRED
38	VISION (NEAR VISION)	JUL 31,1986	EXCEEDED ALLOWED NUMBER OF MISSED APPOIN	REQUIRED
47	WELDERS EXAM	JUL 31,1986	EXCEEDED ALLOWED NUMBER OF MISSED APPOIN	PERSONAL
33	BENZENE	JUL 31,1986	SET UP FOR SCHEDULING	PERSONAL
33	BENZENE	JUL 30,1986	SET UP FOR SCHEDULING	PERSONAL

A-4

EMPLOYEE NAME	SSN	BADGE	SHIFT	BIRTHDATE	OCCUP. JOB TITLE
SMIDELY,WALTER	000000042	38204	DAY	JUN 5,1944	WG3820 SHIPFITTING

CODE	PROGRAM	REMOVED	REASON REMOVED	TYPE
04	LEAD	JUL 31,1986	SET UP FOR SCHEDULING	PERSONAL
04	LEAD	JUL 30,1986	SET UP FOR SCHEDULING	PERSONAL

OPERATION	DESCRIPTION	CONF	MEDICAL PROGRAM
SMB001	SHAPING OPS,BENDING,BENDING	04	LEAD
SMF061	SHAPING OPS,FILING,FILING	25	SOLVENTS
SMF101	SHAPING OPS,FORGING,FORGING	25	SOLVENTS
SOLB001	SOLID OPS,BALLAST,CANNING	25	SOLVENTS
SOLB002	SOLID OPS,BALLAST,CONVEYOR	08	CHROMIUM
ZB001	MISCELLANEOUS,BAGGING,BAGGING	02	ASBESTOS

EMPLOYEE
     SSN   BADGE   SHIFT BIRTHDATE OCCUP JOB TITLE
     EXAM DATE   TIME IN TIME OUT WAGE RATE VISIT REASON

ERROR REPORT

SHOP	APPTS.	TIME	JOB ORDER	COST
106	1	0:45		17.38
923	1	2:00		25.22
911	2	3:30		48.57
TOTAL	4	4:15		91.18

EMPLOYEE.	SSN	BADGE	SHIFT	BIRTHDATE	OCCUP. JOB TITLE
FOLLINGSTAD,MARIANNE	346346346 66656		1	APR 2,1949	WG3506 LABORER
APPOINTMENT: MAY 7,1986	OCCUPATIONAL EXPOSURE			INITIAL	
02 ASBESTOS (PERSONAL)					

JUSTIFICATION: THIS IS A TEST OF THE MISSED APPOINTMENT JUSTIFICATION TO SEE IF THE ROUTINE WILL PRINT OUT SEVERAL
LINES OF TEXT THE TEXT HAS TO BE LONG ENOUGH TO R WRAP ON 132 CHARACTER LINE WIDTH OR ELSE THE TEST WONT
WORK

FOLLINGSTAD,MARIANNE	346346346 66656		1	APR 2,1949	WG3506 LABORER
APPOINTMENT: APR 30,1986	NEW HIRE			INITIAL	
FOLLINGSTAD,MARIANNE	346346346 66666		1	APR 2,1949	WG3506 LABORER
APPOINTMENT: MAY 1,1986	NEW HIRE			INITIAL	
FOLLINGSTAD,MARIANNE	346346346 66666		1	APR 2,1949	WG3506 LABORER
APPOINTMENT: MAY 1,1986	OCCUPATIONAL EXPOSURE			INITIAL	
89 40 HOUR HEARING EXAM (PERSONAL)					
FOLLOW,I WANNA	213339999		1	MAY 5,1945	WG3506
APPOINTMENT: MAY 1,1986	OCCUPATIONAL EXPOSURE			INITIAL	
02 ASBESTOS					
35 SOLVENTS					
FOLLOW,I WANNA	213339999		1	MAY 5,1945	WG3506
APPOINTMENT: MAY 7,1986	OCCUPATIONAL EXPOSURE			INITIAL	
02 ASBESTOS (PERSONAL)					

SCHED.	MISSED TOTAL	PCT	JUSTIFIED NO.	PCT	UNJUSTIFIED NO.	PCT
15	6	40.0	1	16.6	5	83.3

EMPLOYEE	SSN	BADGE	SHIFT	BIRTHDATE	OCCUP. JOB TITLE	
FOLLINGSTAD,MARIANNE	346346346	66666	1	APR 2,1949	WG3506 LABORER	
APPOINTMENT: MAY 14,1986	SPECIAL REQUEST		FOLLOWUP	CANCELLED ON MAY 14,1986	SHOP CANCELLED	
PROGRAM: 02 ASBESTOS (PERSONAL)						
FOLLINGSTAD,MARIANNE	346346346	66666	1	APR 2,1949	WG3506 LABORER	
APPOINTMENT: MAY 14,1986	SPECIAL REQUEST		FOLLOWUP	CANCELLED ON MAY 14,1986	CLINIC CANCELLED	
PROGRAM: 02 ASBESTOS (PERSONAL)						

	CANCELLED		SHOP		CLINIC	
SCHED.	TOTAL	PCT	NO.	PCT	NO.	PCT
14	2	14.2	1	50.0	1	50.0

APPOINTMENT HISTORY REPORT FOR SELECTED EMPLOYEE
THIS REPORT CONTAINS INFORMATION PROTECTED BY THE PRIVACY ACT OF 1974

DATE: JUL 19,1966

EMPLOYEE	SSN	BADGE	SHIFT	DOB	OCCUP. JOB TITLE

FOLLINGSTAD,MARIANNE   SHOP: 190   346346346 66666   DAY   AFR 2.1949   WG3506 LABORER
AGENCY: PISNH
EXAM DATE: 1 MAY 86   SCHED/UNSCHED: SCHEDULED   DISPOSITION: ATTENDED
VISIT REASON: OCCUPATIONAL EXPOSURE   INITIAL/FOLLOWUP: INITIAL   TIME IN: 1815.   TIME OUT: 1330
CANCEL DATE: CANCEL REASON: PHYS. RECOMMEND.:
MISSED APPT. JUSTIFICATION:

PROGRAM: NAME   ENROLL TYPE   EXAM STATUS   RFEXAM FREQ   REASON INCOMPLETE

  02   ASBESTOS   PERSONAL   QUALIFIED   60
  25   SOLVENTS   JOB RELATED   NOT QUALIFIED   12
  09   HEARING   PERSONAL   QUALIFIED   0
  08   CHROMIUM   JOB RELATED   QUALIFIED   12

FOLLINGSTAD,MARIANNE   SHOP: 190   346346346 66666   DAY   AFR 2.1949   WG3506 LABORER
AGENCY: PISNH
EXAM DATE: 1 MAY 86   SCHED/UNSCHED: SCHEDULED   DISPOSITION: MISSED
VISIT REASON: OCCUPATIONAL EXPOSURE   INITIAL/FOLLOWUP: INITIAL   TIME IN: TIME OUT:
CANCEL DATE: CANCEL REASON: PHYS. RECOMMEND.:
MISSED APPT. JUSTIFICATION:

PROGRAM: NAME   ENROLL TYPE   EXAM STATUS   RFEXAM FREQ   REASON INCOMPLETE

  89   40 HOUR HEARING EXAM   PERSONAL   PENDING   0

FOLLINGSTAD,MARIANNE   SHOP: 190   346346346 66666   DAY   AFR 2.1949   WG3506 LABORER
AGENCY: PISNH
EXAM DATE: 7 MAY 86   SCHED/UNSCHED: SCHEDULED   DISPOSITION: MISSED
VISIT REASON: OCCUPATIONAL EXPOSURE   INITIAL/FOLLOWUP: INITIAL   TIME IN: 1900   TIME OUT:
CANCEL DATE: CANCEL REASON: PHYS. RECOMMEND.:
MISSED APPT. JUSTIFICATION: THIS IS A TEST OF THE MISSED APPOINTMENT JUSTIFICATION TO SEE IF THE ROUTINE WILL PRINT OUT SEVERAL
                            LINES OF TEXT THE TEXT HAS TO BE LONG ENOUGH TO A WRAP ON 132 CHARACTER LINE WIDTH OR ELSE THE TEST
                            WONT WORK

PROGRAM: NAME   ENROLL TYPE   EXAM STATUS   RFEXAM FREQ   REASON INCOMPLETE

  02   ASBESTOS   PERSONAL   PENDING   0

FOLLINGSTAD,MARIANNE   SHOP: 190   346346346 66666   DAY   AFR 2.1949   WG3506 LABORER
AGENCY: PISNH
EXAM DATE: 9 MAY 86   SCHED/UNSCHED: SCHEDULED   DISPOSITION: ATTENDED
VISIT REASON: OCCUPATIONAL EXPOSURE   INITIAL/FOLLOWUP: TIME IN: 1015   TIME OUT: 1105
CANCEL DATE: CANCEL REASON: PHYS. RECOMMEND.:
MISSED APPT. JUSTIFICATION:

PROGRAM: NAME   ENROLL TYPE   EXAM STATUS   RFEXAM FREQ   REASON INCOMPLETE

  02   ASBESTOS   PENDING
  04   LEAD   PENDING
  08   CHROMIUM   PENDING

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| | ATTENDED | | MISSED | | CANCELLED | | MISSED JUSTIFIED | | MISSED UNJUSTIFIED | | CANCELLED CLINIC | | CANCELLED SHOP | |
SCHED	NO.	PCT	NO.	PCT	NO.	PCT	NO.	PCT	NO.	PCT	NO.	PCT	NO.	PCT
SHOP: 011														
3	2	66.6	1	33.3	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0
SHOP: 030														
1	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0
SHOP: 051														
1	0	0.0	1	100.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0
SHOP: 190														
11	6	42.8	6	42.8	2	14.2	1	16.6	5	83.3	1	50.0	1	50.0
TOTALS:														
16	8	42.1	8	42.1	3	15.7	2	25.0	6	75.0	1	50.0	1	50.0

20;

A-10

PROGRAM	APPTS.	MISSED	ATTEND	CLINIC CANCEL	SHOP CANCEL	NO RESULT	INCOM. RESULT	MACH. MALFUN	OPER. ABSENT	EMPLOY LEFT	SHOP RECALL	RESULT PEND
ASBESTOS	5	1	2	1	1	0	0	0	0	0	0	2
CHROMIUM	2	0	2	0	0	0	0	0	0	0	0	1
HEARING	1	0	1	0	0	0	0	0	0	0	0	0
LEAD	1	0	1	0	0	0	0	0	0	0	0	1
SOLVENTS	1	0	1	0	0	0	0	0	0	0	0	0
TOTAL:	10	1	7	1	1	0	0	0	0	0	0	4

FTSAH

FOLLINGSTAD,MARIANNE
190   346346346 66556   DAY   APR 2,1949 WG3506 LABORER

PROGRAM: 02 ASBESTOS   ENROLL. STATUS: ENROLLED
DATE LAST: DATE NEXT: 6 MAY 86   EXAM TYPE: BASELINE
LAST QUAL STATUS: NOT QUALIFIED   LAST QUAL DATE: 13 JUN 86
DATE ENROLLED: 6 MAY 86   ENROLL TYPE: REQUIRED
REASON ENROLLED: CHANGE IN OCCUPATION   REEXAM FREQ: 12
DATE REMOVED:
REASON REMOVED:

PROGRAM: 04 LEAD   ENROLL. STATUS: ENROLLED
DATE LAST: DATE NEXT: 27 MAY 86   EXAM TYPE: BASELINE
LAST QUAL STATUS: NOT QUALIFIED   LAST QUAL DATE: 16 JUN 86
DATE ENROLLED: 27 MAY 86   ENROLL TYPE: REQUIRED
REASON ENROLLED: CHANGE IN OCCUPATION   REEXAM FREQ: 6
DATE REMOVED: 21 MAY 86
REASON REMOVED: SET UP FOR SCHEDULING

PROGRAM: 25 SOLVENTS   ENROLL. STATUS: ENROLLED
DATE LAST: DATE NEXT: 1 JUL 86   EXAM TYPE: PERIODIC
LAST QUAL STATUS: NOT QUALIFIED   LAST QUAL DATE: 1 MAY 86
DATE ENROLLED: 3 JUL 86   ENROLL TYPE: REQUIRED
REASON ENROLLED: SPECIAL REQUEST   REEXAM FREQ: 12
DATE REMOVED: 20 MAY 86
REASON REMOVED: SUNGWOMMH

PROGRAM: 79 15 HOUR HEARING EXAM   ENROLL. STATUS: REMOVED
DATE LAST: DATE NEXT: 27 MAY 86   EXAM TYPE: BASELINE
LAST QUAL STATUS: LAST QUAL DATE: 23 JUL 86
DATE ENROLLED: 27 MAY 86   ENROLL TYPE: REQUIRED
REASON ENROLLED: CHANGE IN OCCUPATION   REEXAM FREQ: 0
DATE REMOVED: 27 MAY 86
REASON REMOVED: SET UP FOR SCHEDULING

PROGRAM: 89 40 HOUR HEARING EXAM   ENROLL. STATUS: ENROLLED
DATE LAST: DATE NEXT: EXAM TYPE:
LAST QUAL STATUS: LAST QUAL DATE:
DATE ENROLLED: 17 MAY 85   ENROLL TYPE: PERSONAL
REASON ENROLLED: OCCUPATIONAL EXPOSURE
DATE REMOVED: 17 MAY 86   REEXAM FREQ: 0
REASON REMOVED: SET UP FOR SCHEDULING

PROGRAM: 01 ABRASIVE BLASTING   ENROLL. STATUS: ENROLLED
DATE LAST: 1 MAR 86   DATE NEXT: 27 JUN 86   EXAM TYPE: BASELINE
LAST QUAL STATUS: LAST QUAL DATE:
DATE ENROLLED: 27 MAY 85   ENROLL TYPE: REQUIRED
REASON ENROLLED: CHANGE IN OCCUPATION   REEXAM FREQ: 0
DATE REMOVED:
REASON REMOVED:

PROGRAM: 08 CHROMIUM   ENROLL. STATUS: ENROLLED
DATE LAST: DATE NEXT: 27 MAY 86   EXAM TYPE: BASELINE
LAST QUAL STATUS: NOT QUALIFIED   LAST QUAL DATE: 12 JUN 86
DATE ENROLLED: 27 MAY 86   ENROLL TYPE: REQUIRED
REASON ENROLLED: CHANGE IN OCCUPATION   REEXAM FREQ: 12
DATE REMOVED: 21 MAY 86
REASON REMOVED: SUNGWOMMH

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ENDNOTE:

PROGRAM HISTORY
NAME   SSN   BADGE   SHIFT   BIRTHDATE

OCCUP JOB TITLE   SHOP
AGENCY   AUG 8,1956

SMART,MAXWELL   897364987
WG3504 LABORER
LBNSV   106

02 ASBESTOS
   ENROLL: ENROLLED   DATE LAST: 24 JUN 86   DATE NEXT: 17 JUN 86
   EXAM: BASELINE   STATUS: NOT QUALIFIED   LAST QUAL. DATE: 23 JUL 86
   DATE ENROLLED: 17 JUN 86   ENROLL TYPE: REQUIRED
   REASON ENROLLED: NEW HIRE
   DATE REMOVED: REEXAM: 12
   REASON REMOVED:

04 LEAD
   ENROLL: ENROLLED   DATE LAST: DATE NEXT: 17 JUN 86
   EXAM: BASELINE   STATUS: NOT QUALIFIED   LAST QUAL. DATE: 23 JUL 86
   DATE ENROLLED: 17 JUN 86   ENROLL TYPE: REQUIRED
   REASON ENROLLED: NEW HIRE
   DATE REMOVED: REEXAM: 6
   REASON REMOVED:

79 15 HOUR HEARING EXAM
   ENROLL: REMOVED   DATE LAST: DATE NEXT: 17 JUN 86
   EXAM: BASELINE   STATUS: LAST QUAL. DATE: 23 JUL 86
   DATE ENROLLED: 17 JUN 86   ENROLL TYPE: REQUIRED
   REASON ENROLLED: NEW HIRE
   DATE REMOVED: 17 JUN 86   REEXAM: 0
   REASON REMOVED: SET UP FOR SCHEDULING

08 CHROMIUM
   ENROLL: ENROLLED   DATE LAST: DATE NEXT: 17 JUN 86
   EXAM: BASELINE   STATUS: NOT QUALIFIED   LAST QUAL. DATE: 23 JUL 86
   DATE ENROLLED: 17 JUN 86   ENROLL TYPE: REQUIRED
   REASON ENROLLED: NEW HIRE
   DATE REMOVED: REEXAM: 12
   REASON REMOVED:

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APPENDIX B

EXAMPLES OF OUTPUTS FROM
PRODUCE CLINIC REPORTS PROCESS

B-1

PERSONNEL REQUIRING EXAMS   AGENCY: FISHH   CLINIC: HEALTH RESEARCH   DATE: JUL 24,1986

EMPLOYEE	SSN	BADGE	SHIFT	BIRTHDATE	OCCUP	JOB TITLE

SHOP: 11

FIDDLEMAN,RICHARD   444339876 66289   MAY 5,1940 GS1515 TEST OCCUPATION TITLE

PROGRAM	DATE LAST	DATE NEXT	FREQ	ENROLL TYPE	LENGTH TYPE	EXAM REASON	INIT/FOLL.
02 ASBESTOS		MAY 5,1987	0	PERSONAL	120	BASELINE OCCUPATIONAL EXPOSUR	INITIAL
04 LEAD		MAY 5,1987	0	PERSONAL		BASELINE OCCUPATIONAL EXPOSUR	INITIAL
08 CHROMIUM		MAY 5,1987	0	PERSONAL	60	BASELINE OCCUPATIONAL EXPOSUR	INITIAL
69 NONSENSE	JUN 3,1986	JUL 3,1986	60	REQUIRED		BASELINE INJURY/ILLNESS	INITIAL

LOVETT,TED   888110202   JUN 6,1936 WG3506 LABORER

PROGRAM	DATE LAST	DATE NEXT	FREQ	ENROLL TYPE	LENGTH TYPE	EXAM REASON	INIT/FOLL.
04 LEAD		JUL 19,1986	12	REQUIRED		BASELINE NEW HIRE	INITIAL
25 SOLVENTS		JUL 19,1986	12	REQUIRED	60	BASELINE NEW HIRE	INITIAL
79 15 HOUR HEARING EXAM		JUL 19,1986	0	REQUIRED		BASELINE NEW HIRE	INITIAL
08 CHROMIUM		JUL 19,1986	12	REQUIRED	60	BASELINE NEW HIRE	INITIAL

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MEDICAL APPOINTMENT LIST   FROM: JAN 1,1900 0C00 TO: JAN 1,2200 2400   CLINIC: HEALTH RESEARCH   DATE: JUL 19,1994
THIS REPORT CONTAINS INFORMATION PROTECTED BY THE PRIVACY ACT OF 1974

EXAM DATE TIME EMPLOYEE		SSN	BADGE	SHIFT	BIRTHDATE	OCCUP.	JOB TITLE
	REASON FOR VISIT		INIT/FUL				
	PKG CODE MEDICAL PROGRAM						

17 JUN 86 1500 PIE.MUMBLE   333441111 44444   4 APR 40   GS1515   OPERATIONS RESEARCH ANALYST
              CHANGE IN OCCUPATION   FOLLOWUP
                   02   ASBESTOS
                   25   SOLVENTS

17 JUL 86 1000 CRAWFORD.JOAN   333876099   4 APR 22   GS1515
              CHANGE IN OCCUPATION   FOLLOWUP
                   02   ASBESTOS

Select CLINIC:

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MEDICAL APPOINTMENT LIST BY SHOP

FROM: JAN 1,1900 0000 TO: JAN 1,2200 2400   CLINIC: BRANCH CLINIC MARE ISLAND

DATE: AUG 19,1986

THIS REPORT CONTAINS INFORMATION PROTECTED BY THE PRIVACY ACT OF 1974

EXAM DATE TIME EMPLOYEE	SSN	BADGE #	SHIFT	BIRTHDATE	OCCUP	JOB TITLE
REASON FOR VISIT	INIT/FOL					
PKG CODE MEDICAL PROGRAM						

SHOP: 106

25 AUG 86 700 JACKSON,JANET   55111113 567891   DAY   29 SEP 71   GS0690   INDUSTRIAL HYGIENE
               PERIODIC   INITIAL

               08   CHROMIUM   OCCUPATIONAL EXPOSURE
               04   LEAD   OCCUPATIONAL EXPOSURE
               40   RESPIRATORY PROTECTION   OCCUPATIONAL EXPOSURE
               25   SOLVENTS   CHANGE IN MS REQUIREMENTS

21 AUG 86 1445 TAPPAN,MIKE   554555111 000005   EVENING   13 DEC 14   GS0690   INDUSTRIAL HYGIENE
               PERIODIC   INITIAL

               02   ASBESTOS   CHANGE IN MS REQUIREMENTS
               09   HEARING   CHANGE IN MS REQUIREMENTS
               40   RESPIRATORY PROTECTION   CHANGE IN MS REQUIREMENTS
               16   SIGHT CONSERVATION   CHANGE IN MS REQUIREMENTS
               25   SOLVENTS   CHANGE IN MS REQUIREMENTS

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MEDICAL EXAMINATION APPOINTMENT FORM

TIME IN_____   TIME OUT_____

FROM: BRANCH CLINIC MARE ISLAND   DATE: SEP 17,1986

        VIA: MIKE NOEL   MAIL STOP: T-56

TO: MARX,GROCHO   SSN: 575557777   DOB: JUN 30,1948
                                    BADGE: 222222   SHIFT: EVENING
        OCCUPATION: GS0690   INDUSTRIAL HYGIENE
        SHOP: 106.2

EXAM DATE: AUG 29,1986   TIME: 1445
VISIT REASON: PERIODIC
INITIAL/FOLLOWUP: INITIAL
PROGRAMS: 02 ASBESTOS
               09 HEARING
               40 RESPIRATORY PROTECTION
               16 SIGHT CONSERVATION
               25 SOLVENTS

INSTRUCTIONS:

NO SMOKING FOUR HOURS BEFORE EXAM
NO LOUD NOISES FOR 24 HOURS BEFORE EXAM
FAST FOR 12 HOURS BEFORE EXAM--NO FOOD OR COFFEE

*****THIS NOTICE CONTAINS INFORMATION SUBJECT TO THE PRIVACY ACT OF 1974*****

PLEASE MATCH EMPLOYEES TO TIME SL

EX   HS WILL ALLOW

EXAM DATE	START TIME	STOP TIME	SHIFT	EMPLOYEE	SSN	BADGE #

AGENCY: 106.2

SHOP: MIMS

EXAM DATE	START TIME	STOP TIME	SHIFT
4 AUG 86	1445	1600	EVENING
7 AUG 86	700	715	DAY
12 AUG 86	1445	1515	EVENING
13 AUG 86	1445	1515	EVENING
14 AUG 86	700	845	DAY
14 AUG 86	1445	1515	EVENING
15 AUG 86	700	800	DAY
26 AUG 86	700	745	DAY
27 AUG 86	1445	1600	EVENING
28 AUG 86	1445	1600	EVENING
29 AUG 86	1445	1600	EVENING

LIST OF MEDICAL TESTS

Code	Description
1000000	HISTORY:
1100001	FAMILY HISTORY:
1100050	INCLUDING
1100100	GENERAL
1100150	BLOOD DYSCRASIAS (INCL. LEUK.)
1110000	GENETIC FACTORS
1120000	ILLNESS WITH SYSTEMIC DISFUNC.
1130000	USE OF ALCOHOL
1140000	SMOKING
1200001	PERSONAL HISTORY:
1200050	MEDICAL
1200060	SMOKING
1200070	ALCOHOL INGESTION
1200080	PAST HISTORY OF HEPATITIS
1200090	BLOOD TRANSFUSIONS
1200095	HOSPITALIZATION
1200101	RESPIRATORY SYMPTOMS
1200150	EXP. TO HEPATOTOXIC AGENTS
1200151	INCLUDING DRUGS/CHEMICALS
1200505	USE OF DRUGS
1200513	PREV. EXP. TO LEAD PROD.
1200950	ILLNESS WITH SYSTEM. DYSFUNC.
1200960	STEROID/CYTIOTOXIC TREATMENT
1300001	WORK HISTORY:
1300100	GENERAL
1300110	PREV. EXP. TO'DUSTY OCC.
1300150	PREV. EXPOSURE TO LEAD
1300160	PREV. EXPOSURE TO ASBESTOS
1300170	PREV. EXP. TO BENZENE
1300180	EXP. TO MYELOTOXIC CHEM/DRUGS
1300190	EXP. TO CHROMIUM/CHROMIC ACID
1300200	PREV. EXP. TO FREE SILICA
1300201	EXPOSURE TO HYDROGEN FLUORIDE
1300202	EXP. TO INORGANIC FLUORIDES
1300203	EXP. TO RESP./SKIN IRRITANTS
1300204	EXP. TO PULM. CARCINOGENS
1300210	EXPOSURE TO COAL DUST
1300300	EXP. TO KNOWN CARCINOGENS
1300310	PREV. SENSITIZATION TO TDI
1300320	ALLERGIES (ASTHMA/HAY FEVER)
1400001	PAST MEDICAL HISTORY/ROS
1400004	REPRODUCTIVE SYSTEM
1400006	HISTORY
1400008	ATOPY
1400400	MEDICATIONS TAKEN REGULARLY
1400600	DRUG HISTORY
1400601	USE OF ANTICHOLINERGIC DRUGS
1400602	USE OF ALCOHOL
1400603	USE OF BARBITURATES
1400604	HEPATOTOXIC AGENTS
1400000	ENVIRONMENTAL FACTORS
1500000	GENERAL/NONSPECIFIC SYMPTOMS
1500500	

LIST OF MEDICAL TESTS FOR PROGRAM: 25 SOLVENTS

DATE: JUL 19,1986

		BASELINE	PERIODIC	REMOVAL	AGE	AGE	SEX
	HISTORY:						
1000000	FAMILY HISTORY:						
1100001	PERSONAL HISTORY:	YES					
1200001	PAST MEDICAL HISTORY/KIDS	YES					
1400001	PHYSICAL EXAMINATION:	YES					
2000000	SKIN	YES	YES				
2070000	MUCOUS MEMB. (EYE,NOSE,MOUTH)	YES	YES				
2070100	GENITOURINARY TRACT						
2140200	PREGNANCY	YES	YES			F	
2145200	TESTICAL SIZE	YES	YES			M	
3000000	TESTS AND PROCEDURES						
3010000	HEMATOLOGY	YES	YES				
3020000	CHEMISTRY						
3070400	LIVER PROFILE:	YES	YES				
3080000	CARDIOLOGY	YES	YES		40		
3090000	X-RAY	YES	YES		39		

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MEDICAL EVALUATION FOR: FOLLINGSTAD,MARTANIE   DATE: JUL 24,1986
    SSN: 34344344   BADGE: 66556.   DOB: AFR 2,1949
    OCCUP.: WG3:06   TITLE: LABORER
    AGENCY: FTSMH   SHOP: 190   TIME IN: -------
    CLINIC: HEALTH RESEARCH   APPT: JUL 24,1986 1200   TIME OUT: -------

                                        PHYSICIAN   QUAL/NOT QUAL./INC
                                        ----------   ------------------
    02   ASBESTOS   ----------   ------------------
            ENROLLMENT TYPE: REQUIRED
            EXAM REASON: CHANGE IN OCCUPATION
            EXAM TYPE: BASELINE
            FOLLOWUP FLAG: FOLLOWUP

MEDICAL PROTOCOL :

HISTORY:
    FAMILY HISTORY:
        BLOOD DYSCRASIAS (INCL. LEUK.)
TESTS AND PROCEDURES
    HEMATOLOGY
        KED BLOOD COUNT
    CHEMISTRY
        LIVER PROFILE:

COMMENTS:

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MEDICAL EVALUATION FOR: FULLINGSTAD,MARIANNE   DOB: JUN 20,1965
SSN: 346346346   DOB: APK 2,1942
OCCUP: MG3506
AGENCY: FTSMH   TITLE: LABORER
CLINIC: HEALTH RESEARCH   SHOP: 1RD
                                 APPT: JUN 24,1986

SURVEY B86-0001-TST   DOCUMENT: 92222   DATE: MAR 15,1986
SAMPLED/IN AREA: SAMPLED   RESPIRATOR:
PPE:
NOISE   78 DBA (TWA)
NOISE   DBA (PEAK)
NOISE   PERCENT (OTHER)

SURVEY B86-C001-TST   DOCUMENT: 92223   DATE: MAR 20,1986
SAMPLED/IN AREA: SAMPLED   RESPIRATOR: SOME RESPIRATOR
PPE:
BENZENE   43 MG/M3 (TWA)

APPENDIX C

EXAMPLES OF OUTPUTS FROM
PRODUCE DISCREPANCY REPORTS PROCESS

PERSONNEL FILE DISCREPANCY AUDIT AGENCY: LUNSY   DATE: JUL 24,1986

| NAME | SSN | BADGE | BIRTH DATE | OCCUP. | JOB TITLE | SHOP |

FORBES-HAMILTON,RICHARD   775846464   GS0001 TEST OCCUPATION   260

PROGRAM: 69   NONSENSE   DATE LAST: DATE NEXT:
EXAM TYPE: BASELINE REEXAM FREQ: 55   DATE EXPOSURE REPORTED:
ENROLLED: JUL 21,1986 ENROLL. STATUS: REMOVED ENROLL. TYPE: REQUIRED
REASON ENROLLED: CHANGE IN MS REQUIREMENTS
REMOVED: JUL 21,1986 REASON REMOVED: CHANGE IN MS REQUIREMENTS

DISCREPANCY: BIRTHDATE MISSING

HUTTON-HEAD,KEM   315738548 JUN 6,1978 WG3506 LABORER   180

PROGRAM: 02   ASBESTOS   DATE LAST: DATE NEXT: JUN 17,1986
EXAM TYPE: BASELINE REEXAM FREQ: 12   DATE EXPOSURE REPORTED:
ENROLLED: JUN 17,1986 ENROLL. STATUS: ENROLLED ENROLL. TYPE: REQUIRED
REASON ENROLLED: NEW HIRE
REMOVED: REASON REMOVED:

PROGRAM: 04   LEAD   DATE LAST: DATE NEXT: JUN 17,1986
EXAM TYPE: BASELINE REEXAM FREQ: 6   DATE EXPOSURE REPORTED:
ENROLLED: JUN 17,1986 ENROLL. STATUS: ENROLLED ENROLL. TYPE: REQUIRED
REASON ENROLLED: NEW HIRE
REMOVED: REASON REMOVED:

PROGRAM: 79   15 HOUR HEARING EXAM   DATE LAST: DATE NEXT: JUN 17,1986
EXAM TYPE: BASELINE REEXAM FREQ: 0   DATE EXPOSURE REPORTED:
ENROLLED: JUN 17,1986 ENROLL. STATUS: REMOVED ENROLL. TYPE: REQUIRED
REASON ENROLLED: NEW HIRE
REMOVED: JUN 17,1986 REASON REMOVED: SET UP FOR SCHEDULING

PROGRAM: 08   CHROMIUM   DATE LAST: DATE NEXT: JUN 17,1986
EXAM TYPE: BASELINE REEXAM FREQ: 12   DATE EXPOSURE REPORTED:
ENROLLED: JUN 17,1986 ENROLL. STATUS: ENROLLED ENROLL. TYPE: REQUIRED
REASON ENROLLED: NEW HIRE
REMOVED: REASON REMOVED:

DISCREPANCY: EXAM DATE NOT IN LINE WITH BIRTHDATE (02 ASBESTOS)

DISCREPANCY: EXAM DATE NOT IN LINE WITH BIRTHDATE (04 LEAD)

DISCREPANCY: EXAM DATE NOT IN LINE WITH BIRTHDATE (08 CHROMIUM)

_____

JACKSON,JESSE   534396699   WG3506 LABORER   216

DISCREPANCY: BIRTHDATE MISSING

JACKSON,JESSE   216

DATE: JUL 24,1986

PERSONNEL FILE DISCREPANCY AUDIT AGENCY: LBNSV

NAME	SSN	BADGE	BIRTH DATE	OCCUP.	JOB TITLE	SHOP
ABA,BBB	234647585		JUN 6,1946	GS1515	OPERATIONS RESEARCH ANALYST	225

OCCUPATION REQUIREMENTS:
ASBESTOS
ABRASIVE BLASTING

DISCREPANCY: ADD PROGRAM (ASBESTOS)
(REEXAM FREQUENCIES: 0 12 60)

DISCREPANCY: ADD PROGRAM (ABRASIVE BLASTING)
(REEXAM FREQUENCIES: 0 12)

| CLAUS,SANTA | 239680367 2457 | | JAN 1,1901 | WG3506 | LABORER | 100 |

OCCUPATION REQUIREMENTS:
LEAD
SOLVENTS
15 HOUR HEARING EXAM
CHROMIUM

DISCREPANCY: ADD PROGRAM (LEAD)
(REEXAM FREQUENCIES: 0 6 12)

DISCREPANCY: ADD PROGRAM (SOLVENTS)
(REEXAM FREQUENCIES: 0 12)

DISCREPANCY: ADD PROGRAM (15 HOUR HEARING EXAM)
(REEXAM FREQUENCIES: 0)

DISCREPANCY: ADD PROGRAM (CHROMIUM)
(REEXAM FREQUENCIES: 0 12)

| CRAFFORD,J. CARTER,JR. | 333445655 67890 | | JAN 1,1924 | WG3502 | | 340 |

OCCUPATION REQUIREMENTS:
LEAD
SOLVENTS
15 HOUR HEARING EXAM
CHROMIUM

DISCREPANCY: ADD PROGRAM (LEAD)
(REEXAM FREQUENCIES:)

DISCREPANCY: ADD PROGRAM (SOLVENTS)
(REEXAM FREQUENCIES:)

DISCREPANCY: ADD PROGRAM (15 HOUR HEARING EXAM)

C-4

PROGRAM   DATE: SEP 17,1986
NAME   SSN   BADGE   BIRTH DATE   TITLE   AGENCY   SHOP

ROMANOV,IVAN   000000004 1301   JAN 1,1951 GS1910   QUALITY ASSURANCE   MINS   130

PROGRAM: 09   HEARING   REEXAM FREQ: 12   DATE LAST: DATE NEXT: JUL 28,1986
EXAM TYPE: BASELINE   DATE EXPOSURE REPORTED:
ENROLLED: JUL 28,1986   ENROLL. STATUS: ENROLLED   ENROLL. TYPE: REQUIRED
REASON ENROLLED: CHANGE IN MS REQUIREMENTS
REMOVED:

PROGRAM: 16   SIGHT CONSERVATION   DATE LAST: DATE NEXT: JUL 28,1986
EXAM TYPE: BASELINE   REEXAM FREQ: 24   DATE EXPOSURE REPORTED:
ENROLLED: JUL 28,1986   ENROLL. STATUS: ENROLLED   ENROLL. TYPE: REQUIRED
REASON ENROLLED: CHANGE IN MS REQUIREMENTS
REMOVED:

OCCUPATION REQUIREMENTS:
SIGHT CONSERVATION
VISION (NEAR VISION)

DISCREPANCY: REMOVED - NO LONGER REQUIRED (09 HEARING)

DISCREPANCY: ENROLLED - NEW REQUIREMENT (38 VISION (NEAR VISION))

TIBERIDE THE   411449999 096656   JUL 14,1956 GS1910   QUALITY ASSURANCE   NARF   42000

PROGRAM: 09   HEARING   REEXAM FREQ: 12   DATE LAST: DATE NEXT: JUL 28,1986
EXAM TYPE: BASELINE   DATE EXPOSURE REPORTED:
ENROLLED: JUL 28,1986   ENROLL. STATUS: ENROLLED   ENROLL. TYPE: REQUIRED
REASON ENROLLED: CHANGE IN MS REQUIREMENTS
REMOVED:

PROGRAM: 16   SIGHT CONSERVATION   DATE LAST: DATE NEXT: JUL 28,1986
EXAM TYPE: BASELINE   REEXAM FREQ: 24   DATE EXPOSURE REPORTED:
ENROLLED: JUL 28,1986   ENROLL. STATUS: ENROLLED   ENROLL. TYPE: REQUIRED
REASON ENROLLED: CHANGE IN MS REQUIREMENTS
REMOVED:

OCCUPATION REQUIREMENTS:
SIGHT CONSERVATION
VISION (NEAR VISION)

DISCREPANCY: REMOVED - NO LONGER REQUIRED (09 HEARING)

DISCREPANCY: ENROLLED - NEW REQUIREMENT (38 VISION (NEAR VISION))

APPENDIX D

EXAMPLES OF OUTPUTS FROM
PRODUCE PROGRAM LINKAGE DISPLAYS PROCESS

MEDICAL PROGRAMS BY LOCATION LIST   AUG 19,1986 11:23   PAGE 1
LOCATION NAME

                                    CODE   MEDICAL PROGRAM NAME

M1,BLDG 300,RM 21

                                    07   ISOCYANATES
                                    40   RESPIRATORY PROTECTION

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OPERATION LIST

CODE	OPERATION NAME	CODE	MEDICAL PROGRAM NAME
SOLB003	SOLID OPS.BALLAST,FORKLIFT	35	CRANE AND CONSTRUCTION EXAM
		09	HEARING
		04	LEAD
		16	SIGHT CONSERVATION

CODE MEDICAL PROGRAM NAME

MG3414   MACHINING

09   HEARING
40   RESPIRATORY PROTECTION
16   SIGHT CONSERVATION
25   SOLVENTS
37   VISION (COLOR)

STRESSOR ENTRY INFORMATION

CLASSIFICATIONS:
CARCINOGEN

BENZENE

SYNONYMS:
BENZOLE
BENZOL
COAL NAPHTHA
COAL TAR NAPHTHA
CYCLOHEXATRIENE
PHENE
PHENYL HYDRIDE

NIOSH #:   RAC:
CAS #: 71-43-2

MED. MON: MANDATORY
MAX. DAYS PER QUARTER:
YEAR:

UNITS:PPM

	PEL	TLV	NAVY	OTHER:
CEILING	25			
TWA	10	10	25	
STEL		25	10	

NSAL: 5

UNITS:MG/M3

	PEL	TLV	NAVY	OTHER:
CEILING	50			
TWA		30	50	
STEL		75		

NSAL: 25

TRAINING COURSES INFORMATION

CODE	DESCRIPTION	RETRAIN FREQ. (IN MONTHS)	COURSE STATUS (ACT/INACT)	COURSE TYPE
NOSL-04-48	HAZARD COMMUNICATIONS	6	ACTIVE	OTHER
NOSL-04-10	DETECTING GAS & RADIAT	12	ACTIVE	INTERNAL SAFETY

MEDICAL PROGRAM INFORMATION

CODE	DESCRIPTION
10	HYDROCARBONS
40	RESPIRATORY PROTECTION
33	BENZENE

ACUTE EFFECTS:
THE ACUTE EFFECTS OF BENZENE INTOXICATION INCLUDE HEADACE, VOMITING,
DIZZINESS, AND DISORIENTATION

CHRONIC EFFECTS:
THE CHRONIC EFFECTS OF BENZENE EXPOSURE ARE SEVERE AND REQUIRE LONG TERM
FOLLOWUP; THE SYMPTOMS INCLUDE TARESTHESIAS, AND MEMORY LOSS; THERE IS SOME
INCREASE IN THE LIKELIHOOD OF LUNG CANCER

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